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ADDRESS IN MEDICINE.

BY

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ON CLIMATE, IN SOME OF ITS MEDICAL ASPECTS.

[*Concluded from page 680.*]

The Effect of Climate on the Human Constitution This is a very large subject, and my limits will confine me to a hasty glance at a small part of it. But first I would say a word on the permanency of climate itself.

It is abundantly proved that, in bygone geologic ages, the conditions of heat and moisture were altogether different from what they are at present in the same latitudes; but it is almost equally certain that during the historic period—I will not *now* venture to say the human period—the changes which have occurred have been of a very local and partial kind. It has been shown by Arago and others, that the ripenings of the vintage and harvests took place two thousand years ago at the same times as they do in the same localities of France and Italy at present. The influence of volcanic action, the formation of deltas by great rivers, and perhaps still more the removal of primeval forests, and other results of cultivation, may, however, occasion great alterations in the warmth and moisture, and consequently in the healthiness of districts; but these agencies are scarcely general enough to be properly considered here. A great extension of the polar ice, which appears to have increased much within the last few hundred years along the east coast of Greenland, and to have destroyed many colonies there, is perhaps the only possibility on which the apprehension of any material change in the climate of these islands might be at all reasonably founded. But we may safely rest for many ages to come on the stability of the past; and we have only further to consider whether there is any regular cycle of years through which a similar rotation of seasons revolves. Various periods of this kind have been assigned, and their diversity may perhaps go far to show that there is no validity in any of them. If the calorific action of the sun can be shown to be proportioned to the area of the spots presented to the earth, and those spots can be proved to return to the same place at fixed times, much of astronomical certainty would be attained in regard to the recurrence of like series of seasons; and cycles of ten years have been on this ground inferred, and have been considered to correspond with observation. In our own country, at least, I have not been able to find evidence of the existence of any such regularity of succession. I have laid down on a diagram, from records in my own possession, the monthly temperature in the west of Cornwall for nearly a hundred years, and have been unable to discover anything like periodicity of the kind referred to.

My chief reason for touching on this question here is the bearing it seems to have on the other much agitated question whether there are any material changes in terms of years in the human constitution, such, for example, as would render it generally intolerant at one time of modes of medical treatment which were well borne, and indeed necessary, at another. Without in the least doubting the influence of particular seasons, or that of the diffusion of mild doses of epidemic poisons, I cannot but regard the arguments advanced for such general change of diathesis as very inconclusive. I am old enough to have seen a stimulant system of treatment flourish and die, another of blood-letting and its accompaniments come in, and now a renewed advocacy of the former method, and decrial of the latter. At one and the same time, however, the rival systems have been practised in different neighbouring countries, and by different doctors in the same country. At this moment, for instance, bleeding goes on, *coup sur coup*, in Italy, and is by no means abandoned in France. One thing only has been common to all schools and individuals—the utmost confidence that they were right, and that the others were wrong. I was myself a pupil of Tommasini, at Bologna, the foremost advocate of the contrastimulant doctrines; and of Broussais, who would hardly allow disease to exist without inflammation of the mucous membranes. The one administered a drachm of tartar emetic in the day; the other drained away the patient's blood, with entire satisfaction to himself, and with withering sarcasm against opponents.

The heavens, meantime, and the earth, have gone on as before; the seasons have not changed in any sensible condition; and man, I believe, remains nearly the same animal. It might perhaps be well to alter our mental habit in one point—to begin by thinking it possible that the present fashion may not be exclusively right, and to give some credit for sense and judgment to our predecessors.

If time allowed, it would be interesting to trace the influence of climate on the human constitution, in time as well as space. It is very difficult to decide how much of the peculiarities characterising the various tribes of mankind is due to this agent, and how much to others. One thing is certain: the existing races have in many instances been little altered during historic times. In the Egyptian tombs explored by Belzoni, for instance, Persians, Copts, Jews, and Negroes, are depicted, with their present characteristic lineaments. The Jew especially has remained, and is now, essentially the same under every sky. What the effect might be of a very much longer period, such as recent discoveries seem to be indicating more and more convincingly, for the existence of man, together with the natural selection and development of the families most adapted to each region, it would be presumptuous in me to pronounce.

There is much flexibility in the human constitution, and readiness of acclimatisation, particularly among natives of temperate climates; still this has its limits, and is very much confined to the individual. Thus an Englishman may go all the world over, and retain health and vigour; but, in climates very different from our own, the English stock will hardly take root. In the hotter countries, it becomes extinct in two or three generations; and where the change is less, the frame may by degrees be deeply modified. Thus it can scarcely, I think, be disputed that the descendant of the Pilgrim Fathers in the United States is a very different animal from his ancestors, and from his cousin in the old country. Whether he tends in the direction of the Red Indian, I will not venture to offer an opinion. The relations of race, in its minor divisions, to climate are, I believe, of great importance; and, in connexion with inquiries such as those published by the late Professor Retzius, and those instituted in this country by Mr. Barnard Davis and Dr. Thurnam, are well worthy the attention of this Association.

I will now take a rapid survey of the chief effects of the several elements which go to make up what is called climate on mankind, in health and disease. Of these, *temperature* is that which impresses itself most on the sensations, and has been most regarded as a means of medical action, especially with the view of providing an escape from the cold of winter.

The most important effects of temperature arise out of its relation to the nutrition of the body, taken in its wider sense. Carbonaceous food is the great provision of Nature against cold, and it must be taken in proportion to the degree of cold to be resisted. I have seen a calculation that the daily consumption of such food by an Esquimaux was equal to that of

three hundred Caribs; the Spaniard eating as much as ten Caribs, and the Esquimaux as much as thirty Spaniards. But the most striking instance I have noticed of the power of resisting cold, to be derived from a particular kind of food, is given by Dr. Hays, who accompanied Captain Kane in the late American Expedition to the Polar Seas. He describes some tribes of Esquimaux as living in robust health, *entirely without fire*, in a temperature from 30° to much below zero. Their food was frozen walrus; and this was better liked by the American sailors also, after a while, than what was cooked. There is something satisfactory in being able to see that our remote posterity may be provided for, after our coal-fields are exhausted, by the general use of ice-houses; and that some comfort might remain to them even when the polar ice had invaded our seas, by storing in the larder these denizens of arctic regions, and laying down in the cellar a choice variety of pipes of "particular" oil. The importance of oil and fat in such circumstances is well shown in the account given by another American, Captain Marcy, of what befell his party in passing over the Rocky Mountains during the winter of 1857. He describes the insufficiency of the starved animals, horse, colt, and mule, on which they were reduced to feed, eighteen days before reaching the settlements in New Mexico, to keep up strength in the cold of the deep snows. "Though each of us", he says, "consumed five or six pounds of this meat daily, we continued to grow weak and thin, until, at the end of twelve days, we were able to perform but little labour, and were continually craving for fat meat." Civilisation is not an unmixed good. In cold and even temperate climates, a general use of vegetable food, especially in winter, can only result from an advanced system of cultivation; and there can, I think, be no doubt that the early inhabitants of Britain were indebted to the necessity they were under of living during the winter months on a diet almost exclusively animal for the impunity with which, in the lightest possible garb, they braved the elements. We cannot get at their statistics of consumption; but the sailor, whose food is somewhat similar, is freer from it than the landsman, and suffers little from arctic frosts; whilst that part of the modern community which shrinks from exposure, and takes in very scanty supplies of heat-producing aliment, the fair sex especially, furnishes hosts of victims.

To resist cold, therefore, requires a full action of liver and lungs on a good supply of appropriate food. It is requisite that these organs shall be well developed and sound, as a preliminary condition. Consequently, the native of tropical climes, man or animal, and the individual whose powers of digestion and respiration are much impaired, cannot be safely subjected to continued low temperature. On the other hand, in tropical countries, such internal fuel, and its combustion by the lungs, are much less required; and the skin comes into a higher vital and excretory function. This it possesses in the native; but the stranger from the colder latitudes is engaged in a struggle of compensatory actions, till he becomes partially acclimatised, or succumbs. The ordinary rotation of the seasons presents us with a miniature copy of the effects of these greater changes, which is familiar to us all. Our associate, Dr. E. Smith, has lately examined this with his accustomed precision, and has shown that, in this annually recurring cycle, the respiratory and other chemical changes are lessened from the spring through the summer, to increase again towards winter.

The influence of light, which in the sunbeams can hardly be separated from heat, is no doubt of great importance to animal, as it clearly is to vegetable life and organisation; but its extent and nature are as yet far from ascertained. A considerable advance was made by the discovery, due to a Cornishman, Mr. Robert Hunt, of the actinic or chemical ray in the solar spectrum—an agent on which germination and vegetation chiefly depend; and, as it has been shown that various powers are connected with the different coloured rays, it is probable that a much nicer appreciation of varieties in climate may be ultimately acquired. The difference of a clear or cloudy sky has been shown to have an immense effect on vegetation; and the ripening of fruit depends upon such serenity more than on summer temperature alone. There is also a material lessening in the evolution of oxygen from plants when the sky is overcast; and those excluded from light become blanched. No doubt the sunshine tends similarly to produce vigour in animals; and the avoidance of the darkness of our winters is one valid ground for change of residence at that season. Much of the delicacy of our people is, in my opinion, traceable to their slight acquaintance with the sun; and I have long been convinced that the proclivity of our western miners to consumption is in no small degree attributable, especially among the youthful, to the same cause, only in much more constant and complete operation.

The effects of changes of atmospheric pressure, such as attend on elevation above the level of the sea, are most direct, and chiefly sensible on the extent of respiration. To these I shall have to refer presently, when speaking of mountain climates.

Moisture is an element of very great importance in the influence of climate on the human constitution; but it is one familiar to us all, and I need not add anything here to the remarks already made.

The effects of electrical tension must also be passed by; our knowledge in relation to it, as a constituent element in particular climates, being altogether wanting in precision. Neither shall I make any remarks on ozone, which I cannot but regard as something of an *ignotum pro magnifico*, the observation of which is subject to various fallacies, while its nature and laws of existence have yet to be determined.

We have been considering the several ingredients of which climate is composed, and may turn for a moment to the great varieties of it made up by their combination. These are divided, like the earth itself, into tropical, temperate, and cold. The former are chiefly interesting to us as bearing on many of our foreign possessions, and to a large section of our profession they are objects of daily concern; but they hardly fall within the scope of my present subject. These climates are well known to be more or less injurious to the English constitution; and if, as in the instance of some of the West Indian Islands, recourse may be had to them on account of their comparative immunity from consumption, their liability to other dangerous diseases renders it, as it appears to me, more prudent to choose other localities offering equal advantages with less of risk. The other extreme, the cold climates, are liable to a similar objection, but in a less degree. A polar temperature may be resisted for some time; but the power of assimilating food such as is taken greedily by the natives could not probably be long maintained by the British race; and it seems to me not unlikely that such an inability helped onwards the destruction of Sir John Franklin and his party. But the fashion now rather prevalent among gentlemen, of making Norway and Sweden the scene of their summer migration, might be sometimes adapted by us to the needs of our patients. Probably the all but continuous daylight, so wonderfully energising to vegetative processes, and which seems in some way to prepare the Laplander for his winter's night, would exercise a vitalising influence on languid and scrofulous habits; and the aspect of northern nature during the summer season is congenial and invigorating to our national mind. In several respects, the same purpose is served by a visit to a higher latitude, as by one to a higher elevation above the sea.

But it is within the temperate zones that we can best realise the benefits of change of climate—a change sufficient for our practical purposes, without being so great as to be incompatible with the ordinary range of the organic actions which belongs to the constitution of an Englishman.

As an instrument in the hands of the medical man, climate may be regarded either with a view to prophylaxis—the prevention of future mischief by obviating the tendency to it; or to the treatment of disease actually existing. The reasons which make change of climate desirable are, for the most part, pretty much the same in the two cases. It is wished to avoid the length, coldness, and damp of our winter; and occasionally the relaxing quality of the summer. The purpose is the same; but, in its application to the invalid, a nicety of discrimition is called for as to how far he may bear the remedy and its concomitants, which is by no means equally required in regard to those cases in which the intention is rather hygienic than curative.

There has been some inclination among recent writers to underrate, as I conceive, the importance of the influence of foreign climates on disease. They are disposed to resolve it almost entirely into the mental impressions excited by the change of scene. Thus, with more especial reference to phthisis, for which, more than any other disorder, recourse has been had to southern climes, Professor Hughes Bennett, after alluding to "that exhilarating feeling which the traveller experiences, during early spring, in the south of France, or the borders of the Mediterranean," expresses his belief that "such a feeling insensibly constitutes the real basis of all our belief concerning the good effects of climate". But if, as he afterwards sums up his opinion—in my judgment, a correct one—"that climate is best which will enable the phthisical patient to pass a few hours every day in the open air, without exposure

to cold or vicissitudes of temperature on the one hand, or excessive heat on the other,"—surely there can be no doubt that these desiderata may be to a great extent secured by migration to latitudes where, during the winter months, the days are longer, the sky clearer, and the sun warmer, than in our own. In states of confirmed consumption, it is not, indeed, probable that the end is much, if at all, delayed by such removal; but, even then, the patient who has already breathed the balmy air will not willingly give up what to him is the difference between life and existence, however well aware that his term is brief. It may, I think, be stated generally, that for the correction of certain constitutional tendencies, and for the cure of certain forms of disease, strong climatic agency is by far the most effectual power at our disposal; and here removal to a foreign locality is necessary; at least, nothing to be had, naturally or artificially, in this country, can with equal advantage be substituted for it.

The extension of our own settlements in the southern hemisphere, together with the greatly increased facility of communication, have placed a new series of temperate climates within our reach, which are additionally valuable from their uniting with what Nature offers, the habits, institutions, and often much of the comforts, peculiar to our homes. Their large and open field of enterprise and employment also makes them available to many of those families among the less opulent classes, to whom it would be mere mockery to recommend a residence abroad, which, under the guise of giving life, "would take from them the means by which they live". I have the satisfaction of believing that my advice has in this way conduced to the future healthfulness, perhaps to the preservation, of delicate families. The Cornish miner has more than common facility in providing for himself in these new countries; but for almost every class of industry, as well as for moderate capital, profitable occupation may be readily found.

Another advantage offered by these southern resorts I have sometimes availed myself of; and it is an important one. Placed at the opposite side of the globe, our winter is their summer; and, by removal to them in the autumn, the season of cold and darkness is altogether escaped, and the continuity of those favourable influences is secured, whose interruption by the recurrence of winter is often matter of regret in our own country.

Time would not allow of my entering into details respecting these foreign health-resorts, which may, indeed, be better studied in books; but I will combine with a cursory remark on a few of those which have most lately come into notice, the estimate formed of them by some of my private correspondents. Beginning from the south, the first of our colonies is New Zealand—a station not hitherto much visited in mere pursuit of health, but which is well entitled to become such. As to latitude, it is nearly at the same distance to the south of the equator as Spain is to the north; but the southern hemisphere is altogether cooler than the other. The climate is insular, like our own; and the quantity of rain much the same. Altogether, it seems admirably adapted to such English constitutions as require somewhat more warmth and dryness than can be got at home; and the general effect appears to be invigorative to man and animal. An old friend, who has farmed there largely for many years, tells me that horses, to the breeding of which he chiefly devotes his attention, attain great perfection there; and that some imported, old and apparently worn out, from Australia, seemed to acquire new strength and spirit, and proved durably serviceable. The chief drawback from the merits of the climate is the liability to earthquakes, the recurrence of which has been nearly septennial—in 1841, 1848, and 1856. The description of the last of these, given me the other day by a clerical friend who experienced it, may be amusing. The three movements, the vertical, the horizontal, and that to and fro, were combined. He was thrown violently to the ground in his sitting-room, having risen from his seat to save the ornaments falling from the chimney-piece. The house, which was of wood, and only one storey, was uninjured; but the brick chimneys were thrown down. These shocks are felt in the line of the volcanic mountain chain in New Ulster, with whose internal commotions they are evidently connected; and they are scarcely perceptible in the southern islands of the group. Perhaps the possibility of being eaten by the natives, which appears to be revived, may also excite the imagination to the discredit of this sanitarium.

Australia, extending, as it does, through nearly thirty degrees of latitude, presents, of course, a good deal of variety of climate; less so, however, because it has only been occupied on the seaboard. The mass of land gives to this great island a continental character, and the air is generally rather dry than soft. From what I have collected from many individuals, of different grades, who have resided there, I consider the climate of those settlements favourable to the natives of the mother country, and particularly beneficial to the strumous constitution. I may mention two illustrative cases falling under my own notice. In one, where the constitution was quite shattered from chronic vesical catarrh and phosphatic cystitis, a migration to South Australia was followed by an arrest of these symptoms and a good state of health for several years; the other, who came under my care for hæmoptysis and other phthisical symptoms six years ago, and whose removal to "the diggings" I consequently sanctioned, has just now consulted me again on his way home, having suffered during the last twelvemonth from his old disorder, from which he had been quite free during five years after his arrival in the colony,

The colony at the Cape of Good Hope is of older date than those to which I have referred, but it is only of late years that it has received any considerable expansion. It is situated nearly in the same latitude as South Australia; but its connexion with the great tropical continent of Africa gives it a warmer climate. I have sent phthisical patients there, with very satisfactory results. The history of one of them I may mention, as illustrative of the particular advantages, above referred to, of crossing the equator. A young man, with a strong hereditary claim to consumption, was preparing for the church, when sure indications of the family disease presented themselves; and, after two years of partially successful warding off, he was brought, through bronchitic complication, to a condition of imminent danger; and I feared he would be unable even to embark for the southern latitude, from which alone I could hope, at the approach of winter, that he might obtain a slight respite. He rallied, however, sufficiently to join the ship, the surgeon of which wrote me that he began sensibly to mend as soon as he felt the air from the African coast; and he rapidly gained flesh and strength as he proceeded, till he landed at Cape Town comparatively well. He afterwards took an active part in missionary labours in the colony, and enjoyed a good share of general health, though he fell a victim to his fixed disease after three or four years.

Another patient, also a clergyman, whose symptoms, though well marked, were more chronic, and the predisposition less, seems to have more than scotched the snake; and, after doing a good deal of work in Africa, returned to Europe two or three years ago, and has not relapsed.

Another friend, a family man, who has had a parish near Cape Town for the last ten years, has given me a summary of his experience. The part he lives in is damp, and liable to rheumatic affections, and consumption is not uncommon there, though he has known several sufferers from it who have probably added two or three years to their lives by coming there; and farther to the east he is told it is hardly known. "The climate, on the whole," he says, "is certainly most enjoyable; perhaps rather too hot in the summer, which, I fancy, touches the liver, and in many cases shakes the nerves. In winter, we have two or three days of heavy rain at a time, at intervals; and between these the weather is most delightful."

On this side of the equator, the first invalid resort is Madeira, the queen of insular climates. The merits of this island are so well known to the profession, that they do not require any remarks of mine; but as I have, in answer to my inquiries, been favoured with a communication from a source which represents not only the highly trustworthy observation of the writer, but much also of the experience of a late physician who practised there with great success for many years, after he had found the climate afford security from hæmoptysis to himself, you will, I think, hear some extracts from it with interest. "You inquire first," says my correspondent, "about the Portuguese. The *country* people are a fine race, under moderately favourable circumstances; I mean, when they are tolerably well off for food and clothing. The different parts of the island are very much isolated from each other by the deep ravines and sharp cliffs which intersect them; and the people differ remarkably. In the very poor districts, you meet a stunted race; while, where food is plenty, the hill men (and the country is nearly all hills) are a well made, muscular race; and the women, though not handsome, have clear brown skins, white teeth, and abundant black hair. They are decidedly long lived, if not cut off by accidental disease; but I do not think the *average* of life is very long." The most common diseases are affections of the lungs, attributable to excessive variations of temperature and insufficient woollen clothing; and disorders of the bowels, chiefly arising from errors in diet. "The

townspeople are a very inferior race physically to the countrymen. Indolent habits and the want of pure air tell on them; their complexions are yellow and muddy; and you rarely meet among them the fine muscular forms of the hill men. They are pleasant people to live among, kindly and courteous; and, though faulty in many ways, yet singularly free from crimes of violence. With respect to the English, the good effect of the climate on invalids is often great, but very far from universal. The atmosphere of Funchal is bright and clear, but the hygrometer shows that there is a great deal of moisture in the air. In many cases, this suits invalids, but not always; the want of a more bracing air is sometimes sensibly felt. If it could be ascertained whether a *dry* or a *relaxing* atmosphere agrees with a person, it might be almost foretold whether Madeira would agree, or the contrary. I speak now of curable cases. Where all hope of cure is over, and the only question is of comfort and ease, there is no doubt that the soft delicious air will afford this." The healthy visitors to Madeira often suffer from the relaxing air and the impossibility of taking violent exercise. This is, however, only for a time; for the English residents, though they lose their ruddy complexions, enjoy remarkably good health.... It is quite customary now for invalids to spend a summer on the hills..... The scenery is wonderfully beautiful, and the air so light and elastic that mere existence is a luxury..... We had a cottage at Camacha; but we lived, I may say, in the open air, seldom going into the house in the daytime. Nobody ever caught cold or was ill in those happy summers."

The countries bordering on the Mediterranean have for ages furnished resorts for the invalid, as well as the lounger; and so much has been ably written respecting almost every corner of them, that I am fully dispensed from their criticism as well as description. Malaga has been only of late years brought much into request, but it is fully treated of by Dr. Francis and others. A laudatory notice of Mentone, near Nice, has quite recently been issued by Dr. Henry Bennet; and San Remo, in the same neighbourhood, has been introduced to the acquaintance of the public. The only situations, however, possessing much novelty of interest, are on the opposite shores of Africa, though the term novelty can hardly be appropriate to Egypt, which was recommended by the Greek and Roman physicians; but a revived interest attaches to its comparative exemption from phthisis, and the connexion of this with the almost entire absence of rain. The establishment of the French at Algiers has certainly made known to us, and rendered accessible and pleasant, a new retreat for those who require a generally dry, clear, and warm winter climate, in which consumption is very much less frequent than in the south of Europe. "I will let you know", writes an old friend and patient, who passed the last winter there on account of chest-delicacy in a daughter, "the effect of Algiers on body and mind. For myself, I can only answer, very good. The air so exhilarating, it seemed life to breathe it. I went there knocked up, and feeling very old; and left it ten years younger, as to powers of working, and up to the cares of life again. Neither of my girls liked it as much as I did: the invalid did not sleep well there, and I heard others say the same."

Beyrout, in Syria, has been praised by our consul, Mr. Farley; and it will deserve a trial when lawless violence is kept at bay by somebody more trustworthy than the Turk.

But I must hasten home; and I had hoped to have entered with some fulness into a review of the varieties of climate presented by our own country. Time, however, forbids any attempt of the sort; and it is rendered unnecessary by the skill with which existing materials have been worked up in regard to most of our principal resorts. I say existing materials, for I believe there is still need of accurate and persevering inquiry; and it is a matter of great importance, inasmuch as however highly we may estimate foreign climates, the vast majority of the sick and delicate must always stay in their own country. We have been hitherto moving through the warmer regions of the temperate zones, and they have, of course, only furnished us with winter retreats, the main object of which, in a medical view, is the prevention or relief of chest affections. So it is in this island. The southern and south-western parts of England have been long resorted to as the best escape, without expatriation, from the severity of winter; and with the belief and the hope that pulmonary disease would be thereby mitigated; and here we are met to-day, priests of Esculapius, in a city erected to his honour in consequence of that belief. I was not aware that any decided revolution had taken place in general medical opinion on this matter. But looking into almost the latest work on phthisis, that of Dr. Hogg, I found the following passage: "It has been usual to send persons in incipient consumption to the south of England, or of Europe, but the practice is all but exploded." Truly this is an alarming announcement; the more so, when it is said a little further on, that "the policy of sending consumptive persons to the seaside, may be said to have been weighed in the balance and failed." Our excellent hosts of Torquay may, it seems, speedily find their occupation gone. Really I felt disposed to address my friend Dr. Hogg, who is a Cornish man himself, in the words of the bard of Mantua,

"Neu patriæ validas in viscera vertite vires",

especially when he follows up this "unkindest cut" with a volley from the heavy artillery of Dr. Farr's statistics. I should weary you were I now to follow him into these; but I believe there is no material difficulty in showing that his results are fallacious. The abatement to be allowed to the deaths from consumption by abstracting the mining class must be larger than he has given; for besides that, although the miners *living* were, in 1851, little more than 10 per cent. of the male population of Cornwall, the *mortality* among them in the same year was 16 per cent., it was ascertained long ago, and has lately been confirmed by Mr. R. Q. Couch, that the families of miners suffer from that disease in larger proportion than those of the non-mining class. If we apply such a deduction from the not very high mortality of *females* from consumption, a safer test for mere climate than that of *males*, the rate in Cornwall will compare favourably with many other counties. It is also to be considered that as the general mortality is low in Cornwall,—only 19 in 1,000 inhabitants,—and the mortality from several other diseases is less there than in some places where the deaths from consumption are fewer, a certain number of those who escape must naturally fall victims to that disease, as a certain number would do in those other places if they were not cut off by those other diseases. Penzance, again, like other resorts of the consumptive, must have a mortality above that proper to it among that class. Dr. Hogg also asserts that the seaside is injurious to scrofulous constitutions,—an opinion the reverse, I am comforted to see, of that expressed by Dr. Barker of Worthing in a recent paper. It is, however, true that many seaport towns, some in Devon and Cornwall among them, are conducive to scrofula and to consumption also. This is to be attributed to the tendency, arising out of the conformation of the ground, to the crowding of houses on a limited area, and to the crowding of lodging-houses with a casual population connected with shipping and seafaring. The real influence of sea air may be better judged of from the diseases and mortality of the Scilly Islands, to some of the meteorological conditions of which I have already referred. The deaths there from all causes, during a period of twelve years, have been about 16 in a thousand living; the deaths from consumption are in the proportion of 134 to a population of 50,000, or something less than in England and Wales, whilst of course the proportion of deaths from consumption to other deaths is raised simply by the fewness of the latter. One fact, however, stands out in remarkable prominence in the mortuary returns from these islands. The proportion of males to females in the population is rather more than 11 to 14; that of the male deaths from consumption to the female is only about 4 to 10. The difference in mode of life between the sexes is this, the man lives out of doors, on the sea, or blown upon by its breezes; the habits of the female are, thus stated by Mr. Moyle, to whose kindness I am indebted for full tabulated returns of the details of the island mortality. "The fault of the females here is the habit of sitting too much. There are no out-door amusments to call them forth from their domiciles, which indeed are beautifully clean and neat; the consequence is an eternal *stitch, stitch*, inducing phthisis." Facts these, pregnant with weighty lessons!

It was my intention to have entered somewhat fully into the consideration of summer climates,—the seats of invigorating influences, and especially to have brought before you with sufficient detail the highly interesting and important results of recent investigations into the effects of mountain climates in health and disease; but I must now content myself with mere indications.

Our connexion as a nation with tropical countries has made the profession familiar with the injurious effects of long continued heat; and it no doubt occurred to most of us, as to myself, to remark last year (1859) the debility occasioned by even one prolonged summer. Two modes are open for escaping from excess of heat: the one, removal to a colder climate, that is usually getting nearer to the pole; the other, seeking higher elevations above the level of the sea. The former is little

else than a change of temperature; the latter involves besides a lessening of the pressure of the atmosphere, which entails as a necessary consequence increased respiration. It would appear that there is a considerable amount of exemption from phthisis in high latitudes, and in some particular localities it has been stated to be unknown, as in the rocky island of Marstrand near the coast of Sweden; and it is also certain that the digestive processes are rendered more active by such cooler air. The temperature of the sea being lower than that of the land in summer, a recourse to our coasts is generally considered sufficient refrigeration.

The mountain climate is a much more potent agent. Dr. Lombard of Geneva, probably an old fellow-student of others here as well as myself, has treated very precisely of this topic in his little book *Les Climats de Montagnes*, and he has drawn his materials so much from professional friends in his own country, and from his own experience, that he is a very trustworthy guide. Professor Mühry of Heidelberg, whose work is only known to me through the *Medico-Chirurgical Review*, has taken a wider survey of the subject, but with less of personal knowledge. I can only state Dr. Lombard's conclusions. He divides the Alpine climates into those which are rather soothing than tonic, below 3,000 feet; secondly, the tonic and invigorating, above the former and below 6,500 feet; and, thirdly, the tonic and very exciting, above 6,500 feet. He states that phthisis is seen but rarely in the lower part of the third region, that is, above 6,500 feet; and that it entirely disappears about 1,000 feet higher still; and further, that asthma is peculiar to the highest elevations. Rheumatism is rare in the highest region, but frequent and severe in the middle one, and inflammatory affections of the chest are common in both. Hæmoptysis, which often occurs in the lowest region, is infrequent in the upper two, although other hæmorrhages are rather the reverse. It is, I think, clear that much caution would be required in applying "the difficult air of the iced mountain's top" to very delicate, still more to diseased lungs; but there is reason to believe that in the way of prophylaxis, nothing could be found so energetically beneficial as a residence of a month or two in the height of summer at one of those higher Alpine hotels, where that expansion of the lung which our associate, Dr. E. Smith, has strongly recommended, and Mr. M'Laren has proved can be to some extent attained by gymnastic exercises, becomes a necessity of every inspiration; and is combined with those vivifying influences which make the dullest of men exclaim with Byron:—

> "O there is freshness in the mountain air,
> And health, which bloated ease may never hope to share!"

Mexico is, perhaps, at the highest elevation of any extensive and populous country. It is often resorted to by the Cornish miner and mine agent, and I have myself had many patients who have resided there. One of those friends, the ladies of whose family I have attended, as I have others, in consequence of hæmorrhages, the tendency to which was contracted in Mexico, has given me the results of his long experience as a resident. I will limit myself to a very brief extract. "I chiefly resided at Real del Monte, 9,200 feet above the sea. The barometer stands at 21° 8′, and water boils at 199°. . . . The salubrity of the climate is delightful. . . . Consumption, I believe, is not known here."

And similar in kind, however less in degree, is the influence of our own hills; the invigorating efficacy of which is well shown by the *multum in parvo* strength of the Dartmoor and Exmoor pony. The air of our northern coasts is also wonderfully bracing, and a ride of a few miles will take the invalid to a climate strongly contrasting with that the softness of which has often enabled him to "wish good morrow to the sun" in the depth of winter. I show you in this diagram what a difference there is between the fall of rain at Truro and that at Newquay, some ten miles to the north of it; a difference which shows the necessity of further inquiries before sentence is pronounced on counties in the mass,—for this average of rain is no greater than that at Exeter.

Such inquiries, in their relations to our professional work, particularly deserve encouragement and support from this Association. I venture to express the hope that the opportunity afforded by the census of next year will be laid hold of by us in our corporate capacity, in a spirit of cooperation worthy our noble profession; and that a portion of our funds may be then expended on some performance of more than weekly viability,—some contribution towards a certain knowledge of the existence and the causes of health and disease in different climates and localities, such as can only be bestowed on the public by a body like this,—a great medical organism.

Original Communications.

SCROFULOUS DISEASES OF THE EXTERNAL LYMPHATIC GLANDS:

THEIR NATURE, VARIETY, AND TREATMENT.

By P. C. Price, Esq., Surgeon to the Great Northern Hospital; the Metropolitan Infirmary for Scrofulous Children at Margate; etc.

II.—Chronic Enlargements of the External Lymphatic Glands, from Hypertrophy of Structure, independent of Inflammatory Action.

I have been induced to consider simple enlargements of the external lymphatic glands occurring in scrofulous subjects under two distinct forms, because I believe that a very large number of glandular swellings arise independently of appreciable inflammation. Such a distinction was formerly but slightly, if at all, noticed by authors who have written on the subject of glandular affections; and I am the more desirous to insist on a distinction, because I am sure a correct interpretation can be thus more easily offered as to the non-effect of certain supposed resolvents and discutients, administered for the cure of this form of *so-called* "scrofulous swellings".

Rokitansky, in discussing the various affections to which the lymphatic glands are subject, enumerates under their "anomalies of volume" a distinct hypertrophy, which he considers to consist in an excessive accumulation of parenchyma between the lymphatics interspersed through the gland. He adds, "that in the present deficient state of our knowledge in reference to the structure of lymphatic glands and to the signification of their parenchyma, we must include under the above head (hypertrophy) all enlargements of lymphatic glands which do not depend upon hyperæmia, inflammation, or any obvious secondary formation: although it cannot be doubted that, by such a classification, we are compelled to include with hypertrophies many specific alterations of the glandular parenchyma." (*Pathological Anatomy*, vol. iv.)

Although, pathologically speaking, this kind of hypertrophy may be generally distinguished from that which obtains as the result of more or less chronic inflammatory action, still, during life, it is oftentimes exceedingly difficult to draw a positive distinction. It may occur under two forms. In the first, several of the superficial or deeper glands of the neck (for it is in this region that the affection is usually first detected) are involved. On passing the point of the finger along the sides of the neck, especially near the angle of the jaw, several small more or less oval swellings will be distinguished, varying in size from that of a pea to a large bean. They are painless, or nearly so, when handled, somewhat elastic, of no great hardness, and can be rolled in the cellular tissue in which they repose. The skin is not in the least involved, nor is the patient conscious of their presence at an early period. The state of the health is often apparently good, and frequently only the eye and touch of the surgeon afford evidence of their existence. It may be that the enlargements fail to increase, and remain stationary for many months, or even years.

On the other hand, the affected glands, from various causes, may slowly progress in size, and become firmer and more consolidated to the touch, although no sign of inflammatory action is discoverable. Indeed, glands thus involved seldom admit any direct acute or even subacute inflammation; and consequently suppuration is exceedingly rare, although a marked scrofulous or even tuberculous implication may occur. It is probable that the tendency to hypertrophy may extend to the entire lymphatic glandular system; and that not only the glands immediately associated with those first detected in a state of enlargement, but those having a totally different situation, may become affected. This is of common occurrence. I have frequently known almost every lymphatic gland in a state of hypertrophy; and reference to many museum preparations will show how commonly such is the case. By many observers, it has been supposed that the glands of the mesentery show the earliest indication to hypertrophy, although the affection is more easily recognised when occurring in the neck. Certain it is that hypertrophy of the mesenteric and other abdominal

glands is frequently detected even when no evidence exists of the implication of ganglia more externally situated. Although it has been stated that the increase in size of such enlargements is gradual, still sometimes they rapidly obtain to considerable dimensions, and present very serious obstacles to the functions of respiration, deglutition, and circulation. Under such circumstances, the affection assumes the gravest aspect, and the surgeon is often puzzled to know what means to enforce in order to arrest the further development of the disease.

The second form under which hypertrophy may present is less formidable, and apparently of lesser moment. One, two, or perhaps a single nest of lymphatic glands, may alone be involved. The early signs of the disease are analogous to those exhibited when the affection is more universal. The increase in size is, however, more rapid, and is apt to obtain to a far greater extent. The most usual site is, according to Lebert and other observers, the angle and base of the lower jaw, where the deformity produced is often considerable and inconvenient.

Although the recognition of the disease is not, as a rule, difficult, yet it is oftentimes exceedingly embarrassing to detect the primary cause. It would appear that very frequently the origin of such hypertrophy depends on some systemic derangement more or less immediately connected with the lymphatic system, although it is often difficult to define the exact nature and particular seat of the *origo mali*. Rokitansky is explicit on this point, and states that he is "inclined to regard hypertrophy of the lymphatic glands as a secondary symptomatic phenomenon, and not as a primary and substantive anomaly". (*Op. cit.*, vol. iv.)

In whatever light we regard the origin of the affection, it must, I think, be conceded that a more or less perturbed state of the constitution generally co- if not pre-exists. Many cases illustrating this remark have been under my notice; and, on looking discriminatively into individual histories, it is not difficult to arrive at a definite conclusion on the point. It is by no means uncommon to see the disease well marked in concert with clearly defined scrofulous affections of the skin, scalp, bones, joints, and various organs, showing that it may occur as the direct accompaniment of truly scrofulous manifestations, as well as independently of less strongly evidenced marks of a strumous constitution.

Although no particular age is alone susceptible of this form of glandular hypertrophy, still it is usually accounted an affection of childhood and youth. I have, however, seen isolated examples in individuals approaching advanced manhood, and in the decline of life. I removed some time since a strictly hypertrophied lymphatic gland from the neck of a woman near fifty years of age; and I have now under notice a patient who is the subject of an hypertrophied gland under the base of the lower jaw, at the age of seventy-three. It is difficult positively to assert which sex is more commonly the subject of this form of glandular disturbance. My own statistics of all glandular diseases show that males are more frequently affected than females; but I am unable to speak with positiveness in regard to hypertrophies of glands. Although it is usual with English authors to fix a certain temperament as more disposed to scrofulous affections, whether of the glands or other organs, still it is very doubtful if general experience will allow such an arrangement. The majority of surgeons who have paid attention to this point feel inclined to admit that a *lymphatic temperament* predisposes to most scrofulous affections, and Richerand has gone so far as to assert that scrofulous affections are but an exaggeration of this particular constitutional condition (*Nosog. Chirurg.*, par M. Richerand). Baudelocque, whose name is well known in conjunction with the subject of scrofula, by reason of his work entitled *Etudes sur les Causes, la Nature, et le Traitement de la Maladie Scrophuleuse*, derives, however, quite an opposite conclusion; so that, although it may be feasible, from limited observation, to adhere to certain impressions, still it is, I believe, impossible, or at least impolitic, positively to assert that glandular hypertrophies are limited to one form of scrofulous constitution, or even more frequently met with in it than in another. I shall, however, take an opportunity, in the next chapter, of stating the results of my own carefully collected statistics on this point.

While adverting to the subject of glandular hypertrophy and its occurrence in scrofulous individuals, I cannot avoid saying a few words concerning a disease in which the lymphatic glands are frequently interested. In that condition termed leucocythæmia—in which the blood is in an impoverished condition and an abnormal amount of white corpuscles exists, with enlargement of the spleen, accompanied by special fibroid deposits in this and other organs, and followed by dropsy of the legs and abdomen—the lymphatic glands are frequently involved in hypertrophy. This condition is associated with extreme prostration, and an anæmic state of the system; and when the lymphatic glands are considerably affected, the name *anæmia lymphatica* is given as distinctive of the disease.

Although the affection has been considered by Drs. Hodgkin and Bennett, Kölliker, etc., yet it has received still closer attention from Dr. Wilks of Guy's Hospital; and some very valuable observations have been lately published by this able physician, wherein he quotes cases in which not only the lumbar and other internal lymphatic glands were involved in a more or less nucleated fibrous hypertrophy, but also those of the neck and axilla. One case in particular, which was under the treatment of Dr. Pavy, is particularly interesting, as illustrating the care that is needed in arriving at a correct diagnosis of the true nature of the disease which involves the lymphatic system. (*Guy's Hospital Reports*, vol. v, series 3, for 1859.)

In various numbers of the *Lancet*, several important cases illustrating the implication of the lymphatic system in this disease have been recorded by Dr. Gibb; and of late the affection has met with the attention it so well deserves.

I have no doubt whatever that this condition of the lymphatic glands, associated with constitutional disturbance and disease of other organs, has frequently been mistaken for tuberculous and scrofulous mischief, and treated accordingly. Such a mistake is of the gravest nature, and one that requires prompt recognition, if any success is to be obtained from treatment; for while local applications are often insisted upon when the hypertrophy of the external glands is considerable, under the impression that the mischief is of a tuberculous character, they are really of little avail, but, perhaps, of decided harm when the enlargement is associated with other well marked symptoms of leucocythæmia.

Recognition. It has already been shown in what particular way this form of glandular enlargement may be distinguished from that which obtains from chronic vascular excitement, and, therefore, it is needless to recapitulate the observations previously offered. Before, however, expressing an opinion from simple manipulative examination, it will always be necessary to take into consideration the general constitutional symptoms. Besides the analogy that exists between these two kinds of enlargements, there is a great similitude to other morbid productions, such as encysted and fatty tumours, chronic abscesses, and goitre. The remarks that were offered when pointing out the chief diagnostic distinctions between these diseases and chronic inflammatory conditions of lymphatic glands, will apply with almost like advantage to their discrimination from true glandular hypertrophy, so that it is scarcely necessary to dwell longer on this point.

Pathological Distinctions. Although the pathological differences between this form of enlargement and that arising from inflammatory disturbances seems at once broad and determined, still in practice it is found constantly narrowed, and the two kinds of hypertrophy often exhibit sufficient similitude to admit, if not of confusion, at least, of comparatively nice distinction. On this point, Mr. Paget has well observed that "there are cases intermediate between hypertrophies and the result of inflammation, and no line of distinction can be drawn among them, if we rely on their anatomical characters alone; for in the lowest degrees of inflammation the exuded material may be organised into a very near likeness to the natural tissues, and may thus seem to increase their quantity." (*Lectures on Surgical Pathology*, vol. i.)

True hypertrophy of the lymphatic glands must then be looked upon as a morbid condition dependent on certain causes, and occasionally more or less closely allied to hypertrophies resulting from inflammatory action. And this appears the more probable, because such a condition oftentimes obtains as the result of the disturbed equilibrium from such causes as are known to give rise to mild inflammatory changes.

On examination of a gland thus moderately enlarged, nothing about its exterior will serve to distinguish it from the increase in size which results from other chronic action. On viewing the interior, however, the hypertrophy will be found to depend on an abnormal increase of its natural parenchyma. If the enlargement result solely from such a cause, neither the eye nor the lens will detect any marked trace of vascular derangement or destructive implication of the tubular arrangement of the gland. It is not till the affected gland has assumed considerable size, or met with certain implications, that any perceptible interruption can be traced involving the lymphatic

portion. Acute inflammatory action, as has been already observed, seldom attacks glands in this altered condition, but a slow, tardy scrofulous suppuration, or even tuberculous deposition, not unfrequently leads to destruction. This I have occasionally verified by *post mortem* examination; and I have but little doubt that many so-called scrofulous or tuberculous glands consist, in reality, of certain degenerations of true hypertrophied ganglia.

[*To be continued.*]

ON ALBUMINURIA, AND ITS FERRO-ALBUMINOUS TREATMENT.

By David Nelson, M.D.Edin., formerly Physician to the Queen's Hospital, and Professor of Clinical Medicine, Queen's College, Birmingham.

[*Concluded from page* 685.]

Case III. *Albuminuria, receiving great Relief, but ending in Death from Cold.* Miss J. P., aged 22, was brought to me on March 6th, 1856, having been under the treatment of an irregular practitioner, as for amenorrhœa. She had been ill for about eighteen months, during which period no menses had appeared, and she had been gradually getting worse and worse. When I first saw her, she was deadly pale, and swollen under the eyes, had no appetite, was very drowsy, and troubled with diarrhœa and pain in the loins. Her stools were pale; her urine scanty and frequent; her legs and thighs greatly swollen, being fourteen inches and upwards round the ankle; and her feet so enlarged that her boots and shoes had ceased to be of use, and she wore carpet slippers. The urine was almost one solid mass of albumen; the skin was parched and scaly; and she was frequently afflicted with vomiting. She also had a distaste of animal food, including eggs. To meet urgent symptoms, she first had alterative doses of hydrargyrum cum cretâ and Dover's powder, night and morning; and chalk, calumba, taraxacum, and hydrocyanic acid, twice or thrice a day. These had the effect of altering the hepatic secretions, and staying the sickness and purging; and she then began with the more special remedies. A belladonna and opium plaister was ordered over her loins. She took a diuretic mixture, had a chop for dinner, eggs morning and evening; and, as the sulphates of quinine and iron seemed too potent for her stomach, she took ten grains of the carbonate and phosphate of iron united thrice a day with food. By the 27th of March, all dropsy had disappeared, except in her feet; and she felt lighter and stronger. She did not get up more than once in the night-time, and the albumen did not exceed three-fourths of the urine excreted. On April 3rd, as the food with the powders felt heavy on the stomach, she had liquor pepticus. By the 12th, though she felt easy, she stated that she was tired of the powders, though they were tasteless; and, as the stomach and bowels were in good condition, she had two grains of sulphate of quinine and two of sulphate of iron, in pill, thrice a day; and proceeded with the diet as before. On April 28th, she menstruated for the first time for nearly twenty months, felt quite comfortable, had a colour in her cheeks, and no swellings; while the urine was about one-third albumen. On May 1st, all the favourable symptoms continued; she had a little cough, but that disappeared under a soothing expectorant; and, as she felt nothing to complain of, and seemed to consider the return of menstruation as a cure effected, she ceased attending.

I did not see her again for nearly six months, when I was consulted on October 23rd, for an attack of bronchitis. At that time, there had been no return of anasarca; the colour was good; and, though very slender after the removal of the dropsical swellings, she had felt so strong as to be quite able to attend to her father's business of an innkeeper, getting up early in the morning, and sitting up late at night, without distress. The father and aunt stated that they had difficulty in persuading her to take meat and eggs, etc., as ordered; and that she only took the tonics by fits and starts, neglecting them entirely, if not looked after. However, she got better of the cough, and was to go on with the treatment advised, which she promised to do.

I did not see her again for other eight entire months, during which period it was reported that she felt quite well during the greater part of the time, menstruating regularly until one or two months before, having no dropsy nor pain. For some time back, however, she had much neglected the remedies, her father and aunt stating that the patient seemed to think it foolish to be always taking pills and powders; that she had got tired of eggs, and disliked meat; and, besides, thought she had nothing to complain of. Her face, however, had become paler; and the last menstrual flux had been scantier and less coloured than usual. When I was called to her, on Tuesday, June 23rd, 1857, I learned that she had gone out with a pic-nic party on the preceding Saturday, wearing thin muslin; had sat upon the damp grass, and felt cold and shivering when she got home at night, but took something warm, and went to bed. Next day (Sunday), she still felt poorly, and had a slight dry cough; but thought it would go off by keeping in bed. On Monday, she felt worse, and towards evening suffered greatly from dyspnœa and general oppression; and swelling also had recommenced. Next day, when I saw her, I found the legs and face again swelled; the cough severe; the pulmonary congestion extreme; the expectorated matters tough, ropy, and glutinous; and the urine scanty and excessively albuminous. Her faculties, however, were clear. An aperient and a stimulant expectorant and diuretic mixture, were prescribed; the latter consisting of ipecacuanha, ammonia, tincture of cardamoms, and nitrous ether, with hyoscyamus. On the following day (24th), she continued oppressed and feeble, and was more swollen. The remedies employed did not appear to act. Blisters were ordered to the chest, and also behind the ears, as cerebral symptoms seemed threatening. On the Thursday (25th), the blisters were found not to have acted; she seemed drowsy, stupid, and sinking; the tongue was parched and dark; and the skin dry, but exhaling a urinous odour. The face was puffed, so as almost to close the eyes; and the extremities were immensely distended. No urine passed, nor did there seem to be any in the bladder. Nothing was now ordered, beyond a little wine and water, to moisten the parched tongue. On Friday, the 26th, she was quite comatose, with dilated pupils; and died in the course of the evening, the breathing becoming slower and slower, and the mucus at length filling the trachea.

In this case, which was an extreme one to begin with, there was ground, in the course of the treatment, for hoping that the efforts would have proved more successful than they ultimately were. The rampant symptoms were subdued in no long time, and the patient became so well in her own opinion after two months, that she ceased to do anything beyond taking the tonic medicine irregularly. For six months nearly, she felt perfectly easy; and then was only troubled with a cough, which vanished under simple treatment. Then, again, for other eight months, fourteen in all, she did not herself feel any necessity for medical advice; and then the attack was brought on suddenly by accidental exposure to cold and damp, after a previous partial failure of health for a month or so. It appears to my mind pretty clear that the pic-nic exposure in the light dress had suppressed the cutaneous discharges; that, these being thrown upon the other eliminatory organs, the kidneys and liver had failed in ability to excrete; and that the whole retained excretions, poisoning the mass of the blood, had produced congestion of the lungs and torpor of the brain; and hence the mode of her death. In healthy persons, if one or more excreting organs fail in their functions, there are others with an overplus of capacity and energy, ready to take up the duties; and, by dint of a little brisk reaction and morbid commotion, the end is effected, and life preserved; but where vital organs of depuration are unequal to such a task, as in this instance, death is inevitable.

We should not perhaps be justified in drawing hopeful conclusions from the facts of the above case, were there no others of happier issue to be adduced; but, considering that of Emma Harris, reported amongst the older cases of 1852, who still survives, and those others which are to be presently reported, we are fairly entitled to conclude that, had not this unfortunate young woman so fondly considered herself perfectly cured, so much neglected a perseverance in the remedies and the diet, and so imprudently exposed herself in a manner perfectly out of accordance with all sound advice, she might still have lived, humanly speaking, and been able to live for a period such as we are not able to determine.

Case IV. *Albuminuria of a severe Character, terminating in apparent Recovery.* Master P., a little boy, about five years old, was brought to me on March 19th, 1858. He had been ailing for a considerable time, had lost appetite and spirit, was drowsy, stupid, and feverish; and when he complained of pain, it was in his head or his back. He had been treated for worms, weakness, and so on; and had been sent into the country for fresh air, but with no good effects. The nature of the disease had been quite unsuspected. They saw he was pale, but considered him *stout*. After exhausting the *Materia Medica*, so to speak, the last determination arrived at was to

stop all medicine; but, under that do-nothing system, he still continued to get worse. On the visit, his face was observed to be pale, puffy, and pasty; the eyes being swollen underneath, and the eyes in great measure hidden. He had an anxious expression, and suffocative cough. His bowels were costive; his urine scanty, but frequent; and the legs anasarcous, dimpling deeply under pressure. He had had no preceding scarlatina. The first remedies prescribed were aperients and expectorants; and it was about a week before the bowels were rectified and the cough subdued. Meanwhile, the urine was found to contain 75 per cent. of albumen; that is to say, on being allowed to stand and settle after coagulation, the albumen occupied three-fourths of the entire fluid. On the 25th, the little fellow was seized with convulsions, alternating with stupor. It was then stated that he had passed no urine for nearly twenty-four hours; but when Mr. Yates, of Bath Row, who was now associated with me, introduced the catheter, none was found in the bladder. In this emergency, purgatives were exhibited by the mouth, and a brisk injection administered; while blisters were applied behind the ears; under which agency he rallied, and passed both fæces and urine, the former being hard, lumpy, and variegated, partly dark, and partly white. As the kidneys seemed difficult to be excited, and as the liver was sluggish, he now took alterative doses of the grey mercurial powder at night, and a brisk aperient of jalap in the morning. These rectified the hepatic secretion, and produced a quantity of watery discharge from the bowels; while, to act mildly on the kidneys, he was allowed a solution of supertartrate of potassa as a common drink. At the same time, he was dieted on meat and eggs; and had quinine and carbonate of iron with each meal, in wine thickened with isinglass, and sugared. Of the drink, however, he took so much, being thirsty, that the anasarca greatly increased, and he again seemed to have a tendency to coma. To such extent did the swelling now attain, that the scrotum became nearly as large as his head, the penis being completely buried, and the little quantities of urine that dribbled off excoriating the surrounding surfaces. The abdomen was also swelled to a high degree. This state being so distressing, and the kidneys being sluggish, we judged it advisable to tap the scrotal cavity; and, accordingly, on the 6th of April, Mr. Yates introduced the trocar. At first, the serum flowed freely; but the fluid at the end appearing to thicken, it came away more slowly. However, the drain remaining open, a very large quantity of fluid was carried off in the course of a few days; so that abdomen, scrotum, and legs, assumed much more of the natural appearance. After this, the diuretics acted better; and he went on with the purgatives, the albumen, the quinine, and the steel, as before; the supertartrate of potassa being omitted, and small quantities of aromatic sulphuric acid, with syrup of oranges, being given to allay the urgent thirst. If it did that, and helped to dissolve the carbonate of iron in the stomach, so much the better. By the 24th of April, the purgatives (given every other morning) seemed to have induced a tendency to diarrhœa. They were therefore stopped, and an astringent administered; while the diuretics and special remedies were continued. By the 1st of May, his appetite was good, his bowels regular, and stools natural. He slept comfortably, without being moved by bladder more than once in the night. His colour was better; there was comparatively little anasarca; and his tongue was clean and moist. He had no pain, was lively and playful, and less dependent on his nurse.

In this manner, he steadily improved, until about the middle of May, when, from some error in diet, arising from the visit of a grandmother, who indulged him, in mistaken kindness, with many unwholesome dainties, and late going to bed; he had fresh threatenings of convulsion, with disordered stomach and bowels, and some increase of anasarca. A short course of purging was then resumed, and afterwards he returned to the diuretics, the quinine, steel, albumen, and peptic liquor having been continued throughout. At the end of May he was playing about, had a good colour and appetite, slept soundly, and complained of nothing whatever. There was only a little œdema of the feet and ankle at night when he had been sitting up long. The albumen, at this period, was not more than one-sixth. He improved in the same satisfactory manner all through the next month of June, the albumen becoming reduced to about a twelfth and sometimes a sixteenth. He now went out, and, from the change in his colour and his activity in running about, excited the astonishment of those neighbours who were wont to observe his heavy pale appearance as he was carried about; the convulsions and the coma having also damped all hope of recovery. Towards the end of June, he was taken by the nurse into the country, with directions to go on with the eggs and steel. When Mr. Yates last examined the urine, he found no trace of albumen, and there has been no relapse up till now, the 30th of June, 1860. This is one of the instances in which, I think, the favourable change can be referred with confidence to the treatment pursued. We can never know what was the precise condition of the kidneys when the diseased action was paramount, and may also never know the condition of the same organs after death. So far, morbo-anatomically and pathologically, our suppositions must be mere theory; but that the albuminuria did exist, and was treated upon definite simple principles, and disappeared, are material facts of a manifold more importance to the practical physician than all the speculations in the world.

Case v. *Albuminuria preceded by Anæmia and Amenorrhœa, with apparent Recovery.* Miss E. R., aged 18, and residing in a healthy part of the county of Worcester, first appeared before me on the 9th of July, 1857. She had been ill for eighteen months before, and had ceased to menstruate during that time. She, like the others, was pale, puffy, and pasty in aspect, and was immensely swelled in the lower part of the body. The ankles were fifteen inches round, and the legs and thighs in proportion; the abdomen also was swollen, and even the labia greatly distended. She was drowsy and without appetite, especially disliking eggs and other animal food, and complained of headache, languor, and nausea. The urine was frequent and scanty, and of milky appearance. The mother stated that the gentleman she had lately been under had told her that her daughter was not suffering from common dropsy, but from what was called Bright's dropsy, from which he feared there was no possible recovery, but that she might try what could be done for her in Birmingham, and accordingly she was sent to me. Her urine then was fully six-eighths albumen, and she had some cough. She was first ordered the aloes and assafœtida pills at night, with a pectoral and diuretic mixture, and also the muriated iron in peptic liquor, and from four to six eggs a day, in one form or other, and as a medicine, without regard to her taste or inclination. This was insisted upon, not as a luxury, but a necessity, and she promised a rigid compliance. On July 20th the swelling had somewhat decreased, and she continued the treatment. By the 30th, the swellings were noted to be much less, and the colour somewhat improved, the albumen being reduced to about three-fourths. She was less drowsy, and the bladder was less irritable.

On August 10th she had an attack of asthmatic bronchitis, for which she took æthereal tincture of lobelia, etc., and got better. The swellings now continued to decrease, and the colour to improve steadily, so that by the 22nd of October the anasarca was almost gone, the ankle measuring eight inches, while the albumen was only one-fourth of the urine passed. She now took two grains of sulphate of quinine, and the same of sulphate of iron, in pill thrice a day, and the peptic liquor as required, the diet being as before. In November she had a menstrual flux, and again in December, when there was no anasarca, and the colour was very good, and the albumen only one-sixth. She said she felt strong, and able to walk and work as well as ever she did in her life. She was advised, however, to continue the tonic treatment and diet. On the 18th of January, 1859, she reported that she felt perfectly well, again on the 18th of March, and also on June 13th, when there was only a mere trace of albumen, menstruation going on regularly and everything else being right. She has since visited me, in 1860, within two months back, remaining of good colour, regularly menstruating, and feeling well; but she perseveres in taking the phosphate and carbonate of iron, and meat diet, etc. On each occasion she looked well, and reported herself hearty, strong, and regular in all her bodily functions. On the last occasion, there was some mucus in the urine, but scarcely a trace of albumen, if any at all. Within the last few days, being called into the neighbourhood where she lives, I heard her spoken of as being in what is called "rude health". Here, I think, we have an equal right to infer that the steady improvement that took place was due to the steady treatment pursued. The utility of the substitutive principle, which I have heretofore strongly advocated, is, I apprehend, impossible of being controverted. It possesses, above all, the distinguishing characteristic of simplicity—a simplicity almost too simple for those who delight in startling novelties and far fetched speculations. But this is obvious that, whereas the bodily frame is formed of certain elements, or of compound radicals, acting after the manner of elements in their attractions, repulsions, and combinations, and whereas such bodily frame is impaired if one or more of such elements or compound radicals be not duly sup-

plied, it follows, as a matter of necessity, that when they are found wanting or deficient they ought to be supplied, if possible. It may happen, in some cases, that the very organisation itself is incapable af appropriating such pabulum after being furnished with it, but these are the exceptions, and not the rule, unless such organisation be worn out by protracted disease or old age. In the special matter of this albuminuria, as we see that in most cases the dreaded symptom seems to be preceded by hæmorrhage or other sources of drainage of the red particles, and is, when it takes place, itself a drainage of the albumen, so an extra supply of steel and albumen appears the readiest method of meeting these evils, and the following deductions may therefore be advanced with safety.

1. When the premonitory symptoms of debility and anæmia have not as yet produced actual renal disorganisation, the supplies of the deficient elements afford a fair hope of averting the threatened malady of albuminuria.

2. If the renal disorganisation be commencing, the improvement of the mass of the blood by such means may yet give the constitution the power of arresting the dire changes that may precede, accompany, or supervene upon the albuminuria.

3. Even if the disorganisation be considerably advanced, such supplies may postpone the fatal issue for an indefinite period.

The cases of absolute and complete disorganisation or disglanding are, of course, as already observed, beyond the scope of this or any other therapeutic paper, and belong exclusively to the province of morbid anatomy.

MINOR QUERIES IN MEDICAL SCIENCE.

By W. Hinds, M.D., Lecturer on Botanical Science at the Birmingham Midland Institute.

II.—Chorea and Acute Pericarditis: What is the Nature of their Relation?

Case iii. A little girl, aged 10 or 11 years, was attacked with fever and pains in the joints, especially of the shoulders and knees, and had a most distressing pain referred to the region of the heart. The attack began by slight indisposition for about a week before I saw her, and there was also some gradually increasing cardiac pain. On April 22nd, a physical examination revealed a to-and-fro or friction-sound, with a kind of bellows-murmur apparently intermingled. There was some cough; no dulness, nor crepitation over the chest. By the 25th, the to-and-fro sound had become very distinct indeed and louder. The countenance was anxious, and expressed distress.

From the first, the case was treated by leeching over the region of the heart, and by calomel in repeated doses; also by a blister, which was dressed with very much diluted mercurial ointment.

April 28th. The friction-sound became less rough; the gums were tender from the mercury. The breathing was less short, and the pulse fuller. There was no delirium, but a little jactitation and restlessness.

May 1st. The tongue was found blistered on the right side; the friction-sound still continued; and chorea had completely supervened. The arms were constantly tossing about involuntarily. Half words were continually uttered. There was perfect consciousness, and the mind was apparently unobscured in the slightest degree. The jerking movements were so severe, that the patient was near falling out of bed sometimes. She had had no sleep for two nights; she answered questions in an abrupt and jerking manner. The skin was cool, and there was no fever. The patient sank down in the bed, and could not be kept with the head upon the pillow. She declared herself free from pain everywhere, except in the arms. The mucous membrane of the tongue was much ulcerated, probably by the mercury. She took half a grain of opium each of the last two nights without any effect. The calomel was ordered to be omitted.

℞ Ætheris chlor. ʒiss; tincturæ opii ɱxl; aquæ ʒiv. M. Capiat cochleare medium secundâ quâque horâ.

She was also ordered to take the carbonate of iron in six-grain doses thrice daily; and to have free nourishment.

May 4th. She was much better; had slept many times, an hour at once. The movements were much less severe. The skin was quite cool. She had more command of speech.

May 7th. No further improvement had taken place. There was insomnia, even though she took last night a grain of powdered opium. Her general aspect was about as before. She was ordered to have one-sixth of a grain of morphia and two grains of extract of hyoscyamus at bed-time, and to change the carbonate of iron for tincture of the sesquichloride. The friction-sounds were still evident.

May 14th. She had slept well the last night or two for the first time since the attack. The choreal movements were gone; there was not the least trace left. She was dressed, and able to sit up. There still remained the friction-sound, though not so distinct.

May 21st. The patient appeared well, except some general weakness. At the same time, the friction-sound, to some extent present at the last examination, had entirely ceased. There was a very soft bellows-murmur only with the first sound.

Remarks. The last statement shows that active or calomel treatment omitted fourteen days before, must not necessarily be pursued because the to-and-fro sound exists—the treatment being regulated by the whole circumstances. It is evident that the inflammation of the pericardium from which the exudation of lymph proceeds, requires special treatment only so long as it lasts, and that the exuded lymph which makes the two surfaces rub together, so as to produce audible sounds, will or can only gradually disappear, and will do so with even a tonic treatment. I am aware that this contains an assumption at variance with the views of some high authorities in medicine.

The view here alluded to is, that the lymph on the surface of the heart and pericardium never does clear away; and that when the friction-sound ceases, it can only be because the two surfaces become glued together. I believe this view to be unsubstantiated; but reserve this special point for a future paper, when I shall give other cases in illustration. To discuss it now, would be wandering from my present object—which is to inquire into the relation which the disease under notice holds to chorea.

The connexion of chorea with acute rheumatism was probably first specially noticed and commented on by Dr. Bright, in the *Medico-Chirurgical Transactions*. It has been also mentioned by Dr. Copland; and Dr. Watson says:—"I certainly have seen jactitations like those of chorea in a few instances of rheumatic carditis." Dr. Watson, however, does "not perceive any obvious or direct connexion between the cardiac disorder and the nervous disorder"; but he conjectures some relation to the fibrous structures supposed to be implicated in both, or else some morbid condition of the membranes of the spinal canal.

It is scarcely, I think, desirable to adopt either of these views of that relation. The history of the case given above, shows the supervention of clonic spasm to have occurred exactly at that point at which the nervous system became exhausted, and its complete disappearance at the exact point when the exhaustion may be regarded as removed; and that there is manifestly a more direct or intimate connexion here than simply with the disease itself, for the cardiac affection not only began a considerable time before clonic spasms began, but must be regarded as not entirely removed even after their subsidence. Remotely, however, no doubt, there is ground for an indirect connexion. Nervous symptoms unquestionably do often occur in even chronic affections of the heart.

In carditis, the nervous symptoms are shown in the "careworn" and in the "anxious expression" of countenance, and the "distress" so generally noted. Then circulatory disturbance tends also to insomnia; and when the heart is inflamed, and its movements obstructed, an impression will of necessity be stamped upon the nervous system and brain. It may be simple distress or delirium, or clonic spasm—the two former being the most common.

The state of exhaustion being induced, and the nervous system being also in this manner excited, and that in a delicate or nervous subject, will sufficiently, I believe, account for the choreal affection. The power of the brain and of the will are nearly prostrated. In the alimentary canal are present stimulating and vitiated secretions and other morbid matters, which often alone will give rise to spasm, as we see in cholera, in tænia, and many other cases.

The doctrine of spinal irritation in even idiopathic chorea is a very questionable one. If we look to the causes of chorea, enumerated by the best authorities as unquestionably ascertained, we shall find these to be of two classes; namely, *cerebral* or *centric*, and *peripheral*. Amongst the most prominent of these causes are sudden shock or fright, blows on the head

of the first class, and gastric irritation from irritating matters and worms, and painful menstruation on the other.

For spinal irritation, therefore, a term which should probably be expunged altogether from medical etiology, we may, I think, substitute *peripheral* irritation of one kind or other—a really intelligible and meaning term—in some if not many of the cases sought to be explained by the former.

Then we have *paralysis agitans*, in some persons with semi-worn-out cerebral power, evidently one phase of the choreal or clonic state of the muscles.

From a careful examination of this subject, I find it difficult to conclude that any more direct relation exists between chorea and carditis than the one now explained; and I do not think it at all necessary to this inquiry, even if it were possible to attempt anything in the way of explanation as to that mysterious connexion between the cardiac and other ganglia of the sympathetic and the cerebral and true spinal system, nor of the *modus operandi* of the influence which an inflamed heart would exercise through this relation upon the brain and nervous system.

CASES ILLUSTRATIVE OF THE INFLUENCE OF BELLADONNA.

By Richard Hughes, M.R.C.S., L.R.C.P.Ed.(Exam.), Surgeon to the Brighton Orthopædic Hospital.

In two papers—one contained in the British Medical Journal for June 2nd, 1860, and the other in the *London Medical Review* for August 1860—I have discussed at some length the physiological influence of belladonna. The conclusions to which I have there come are, that this drug is an excitant of the sympathetic nervous system, and a depressant (mainly by local action) of the cerebro-spinal system.

In the following paper, I propose to exhibit some results of the practical application of this theory, and to point out the farther indications for practice thereby afforded. And I will begin with cases where the action of this drug upon the sympathetic system appears to be the *rationale* of its curative influence.

Case I. *Enuresis.* July 1859. George M., aged 14, had long suffered from nocturnal incontinence of urine. There was nothing particular about the general appearance of the patient, or that of his urine. I ordered small doses of tincture of cantharides, which relieved him temporarily; but immediate relapse followed its discontinuance. I now prescribed one-third of a grain of extract of belladonna twice a day, in cinnamon-water. In three days his complaint left him; a slight relapse, about a week subsequently, was immediately removed by a few more doses of the medicine; and he has since been entirely free of his ailment.

Remarks. Incontinence of urine may obviously result from two immediate causes. 1. From over-action of the longitudinal fibres of the muscular coat of the bladder (detrusor urinæ). This is usually excited by some irritating quality of the urine, and is best removed by alkaline medicines and opiate suppositories. 2. From weakness or paralysis of its sphincter. This second and far more common cause of enuresis, usually met with in delicate children, requires for its cure some agent capable of toning the sphincter muscle, either immediately, or through the medium of its nerves. Such an agent we have, according to my views, in belladonna; and, accordingly, the accounts of the influence of this drug over the disease from all parts of Great Britain and the Continent are highly encouraging. It rarely fails to overcome it, and in its use is subject to none of the evils occasionally produced by cantharides.

In prescribing this drug for children, the discovery of Dr. Fuller as to its comparatively slight effects on young subjects must be borne in mind; and what would seem to be large doses must be unhesitatingly used.

Case II. *Milk-Abscess.* July 1860. Emily H., aged 24, nine weeks after confinement caught cold. When I saw her, I found at the upper part of the left breast a hard swelling elevated above the surface, of about the size of a hen's egg; it was very painful, red, hot, and tender to the touch. There was also pain in the right side, constipation, headache, high fever; and, in the course of the preceding night, there had been some delirium. The fever had somewhat abated since vomiting a quantity of pure bile early in the morning. These symptoms pointed to concomitant derangement of the liver, and soon yielded to a mercurial pill and saline draught. The state of the breast I treated by suspending the mamma by a handkerchief tied over the shoulder, and keeping the swelling covered with the unguentum belladonnæ of the *Pharmacopœia*. In twelve hours, all pain had ceased, and there had been no increase of swelling. Next day, the redness and heat had gone, some tenderness only remaining. The swelling remained stationary and slightly tender for a few days, then slowly disappeared. The infant was not put to the breast during the mother's illness, and the general fever was sufficient to diminish the secretion of milk; but, as soon as she became convalescent, the flow of milk in both breasts returned as freely as before.

Remarks. The localised inflammation of the breast to which (from its great tendency to suppuration) this term "milk-abscess" is commonly applied, has now been frequently treated by belladonna. This drug has been ascertained to possess galactifuge properties; and accordingly, being applied in the form of extract or ointment around the nipple in these cases, it speedily checks the secretion of milk, and with it the inflammation (British Medical Journal, Feb. 6, May 29, June 12, 1858, etc.).

The galactifuge properties of belladonna are easily explicable upon the theory of its action which I have advanced. Cl. Bernard has found that there are two ways of diminishing the secreting power of a gland—1, galvanising the sympathetic nerves which supply its blood-vessels; 2, dividing the cerebro-spinal nerves which supply its secreting cells. Belladonna, according to my view of it, both excites the sympathetic (as by galvanism), and depresses the cerebro-spinal influence (as by section) of the parts which it affects. The result of its application to a gland like the breast will therefore be to diminish alike its secreting power and the supply of the material on which that power is exercised. And this galactifuge property of the drug will be found invaluable in cases of still-birth, premature weaning, and others, where the check of secretion of milk is loudly called for.

But it will be noticed that, in the case I have recorded, there was no check of the secretion of milk. Not to speak of the superior practical advantages of a plan of treatment which avoids this unpleasant concomitant, it is obvious that the *rationale* of the cure must be a different one. It seems to me to resolve itself into the simple action of belladonna in exciting the vaso-motor nerves, and thereby contracting the capillaries. The essence of the inflammatory condition, to my thinking, is a morbidly dilated state of these vessels. The exudation from them, on which Professor Hughes Bennett and his school lay so much stress, is surely a consequence only of their preternatural dilatation and fulness. A substance which will contract them will save them the necessity of relieving themselves by exudation at all, and, even when this has taken place, will most surely promote its absorption. And this was the view of John Hunter. "If," he wrote in 1794, "we could discover an agent which would cause the contraction of the extreme vessels, we should have in this the true remedy for inflammation."

This case, then, of cure of threatened milk-abscess by the local application of belladonna, appears to open a wide field for the treatment of inflammation in general. The three indications which inflammation gives us for treatment are—1. To moderate the force and frequency of the heart's action; 2. To diminish the superfibrination of the blood; 3. To reduce the hyperæmia of the part affected. The old mode of effecting the first two objects—in other words, of relieving the symptomatic inflammatory fever—was to bleed, and to give mercury; which may fairly be described as robbing a patient of a portion of his life, and poisoning the remainder. A more enlightened practice fulfils the former indication by antimony, aconite, and the other substances which have this physiological effect upon the heart; and the latter by low diet, diluents, and salines.* The third indication—the reduction of the hyperæmia of the part—is commonly met by local bleeding and cold. But these are measures only applicable in their fulness to external inflammations, and even there are open to much improvement. Local bleeding, however efficacious, wastes blood, and leaves the capillaries weak and still morbidly dilated; and cold must be continuously applied, to be of avail. We should gain immensely, could we find a remedy capable of acting, whether locally or through the general system, upon the nerves of the inflamed part, so that its dilated capillaries might be aided to that contraction for which Nature is striving, and thus the hyperæmia of the part reduced without the loss of a drop of blood, or the inconveniences inseparable from leeches, cupping, and the continuous application of cold.

* I find nitre, which combines both these actions, an admirable general remedy for the mild fevers and inflammations of childhood.

Such an agent I believe we have in belladonna; and I augur an immense advance in our control over inflammation as its use therein becomes extended within the limits which practical experience alone can define. (See the *Lancet* for Aug. 4, 1860, for a case of myelitis treated by belladonna applied along the spine.)

Case iii. *Congestive Headache.* August 1860. Mrs. M., aged 74, for four days in succession had been visited with severe headache, beginning with blindness, and lasting the greater part of the day. Similar headaches, some years ago, had been relieved by leeching. The administration of belladonna was commenced at the first coming on of the blindness, on the fifth day. The attack this day passed off sooner than usual. On the sixth day, there was but a slight attack; and since then there have been none.

Remarks. The remarks made upon the last case will in most respects apply here, substituting congestion for inflammation. The congestive character of the headaches seemed marked—1, by the accompanying blindness; 2, by the relief formerly afforded by leeches; 3, by the absence of good effect from a full dose of Hoffman's anodyne—a medicine which I find invaluable in cases of simple nervous headache. Here the belladonna accomplished the same good end as the leeches, without their expense, inconvenience, or spoliation of the vital fluid.

The result of this case would seem to indicate the use of belladonna to remove that habitual tendency to congestion of the brain which usually results in apoplexy.

[*To be continued.*]

Progress of Medical Science:

AT HOME AND ABROAD.

SURGERY.

PROSTATORRHŒA.

Under the title of Practical Observations on the Nature and Treatment of Prostatorrhœa, Dr. S. D. Gross has published, in the *North American Medico-Chirurgical Review* for July, a paper on an affection which does not appear to have been hitherto distinctly described by surgical writers, although it is of sufficiently frequent occurrence. In reference, however, to the fact of its description, a correspondent of this Journal, if we recollect rightly, described its symptoms a year or two ago; but we cannot, at the present time, give the reference to the contribution. As, then, the essay of Dr. Gross is the first in which we remember to have seen the disorder distinctly described and localised, we shall reprint the greater part of it.

Prostatorrhœa is, as the term implies, a discharge from the prostate gland, generally of a thin mucous character, dependent upon irritation, if not actual inflammation, of the component tissues of that organ. The reason why the disease has not hitherto received any specific name or place in surgical nomenclature, is simply because it has always been confounded with other lesions, as gleet, or chronic urethritis, seminal losses, and cystorrhœa, or chronic inflammation of the mucous membrrne of the bladder; from which, in fact, it is often difficult to distinguish it.

Dr. Gross has not met with prostatorrhœa in children or very young subjects, probably because all kinds of diseases of the prostate are so very rare at that period of life. That it may occur, however, even at a very tender age, is altogether likely, especially in children labouring under stone in the bladder, prolapse of the bowel, or worms in the rectum, causing the organ to suffer from reflected irritation. After the twentieth year the disease is sufficiently common, and instances are occasionally met with even in very old persons. As long as the prostate gland remains small and inactive, or is not brought fully under the influence of the sexual organs, with which it is so intimately associated, it is comparatively infrequent.

Dr. Gross is not able to say, from his experience, what classes of persons are most liable to suffer from this affection; but it has seemed to him that it is most frequent in those of a sanguineo-nervous temperament, with strong sexual propensities, leading to the frequent indulgence of the venereal appetite, if not to positive venereal excesses, either in the natural manner or by masturbation. An irritation would thus seem to be established in the prostate gland, attended with more or less discharge of its peculiar secretion, either in a normal or abnormal state. Single and married men are, apparently, equally prone to it. Once established, it is probable that certain occupations may serve to keep it up; and it is also likely that there are certain employments which may predispose to it, although it would require a much longer experience than what is possessed by any one individual to point them out in a definite or satisfactory manner. Intemperance in eating and drinking, frequent horseback exercise, sexual abuse, and disease of the bladder, anus, and rectum, may all be regarded as contributing to such a result.

The exciting *causes* of prostatorrhœa are not always very evident. In most of the cases that have fallen under my observation, the affection was traceable, either directly or indirectly, to venereal excesses, chronic inflammation of the neck of the bladder, stricture of the urethra, or disease of some kind or other of this canal. In some cases it has its origin in disorder of the lower bowel, as hemorrhoids, prolapse, fissure, fistulæ, ascarides, or the lodgment of some foreign body. It is easy to conceive how reflected irritation might induce this disease. The connection between the prostate gland and anorectal region is very close and intimate, and hence whatever affects the one will almost be sure, in time, to implicate the other, either in consequence of proximity of structure, or as an effect of the laws of sympathy. However this may be, no judicious surgeon ever omits to examine these parts most thoroughly in the event of any serious disease of any of them before he attempts a course of treatment. Temporary prostatorrhœa is occasionally excited by the exhibition of internal remedies, as drastic cathartics, cantharides, and spirits of turpentine; or, in short, whatever has a tendency to invite a preternatural afflux of blood to the prostate gland and neck of the bladder, or to the posterior portion of the urethra. Another cause of the disease, and, according to Dr. Gross's experience, a very common one, especially in young men, is masturbation or self-pollution.

The *symptoms* of prostatorrhœa are sufficiently characteristic. The most prominent, as already stated, is a discharge of mucus, generally perfectly clear and transparent, more or less ropy, and of varying quantity, from a few drops to a drachm and upwards, in the twenty-four hours. It is seldom that it is puriform, and still more rare that it is purulent. When considerable, the flow keeps up almost a constant moisture at the orifice of the urethra, and may even make a decided impression upon the patient's linen, leaving it wet and stained, somewhat in the same manner as in gleet or gonorrhœa, though in a much less marked degree. The most copious evacuations of this kind generally occur while the patient is at the water-closet, engaged in straining, especially if the bowels are constipated, or the fæcal matter is uncommonly hard, or greatly distends the rectum, so as to exert an unusual amount of pressure upon the prostate gland.

The discharge, whether small or large, is often attended with a peculiar tickling sensation, referred by the patient to the prostate gland, from which it frequently extends along the whole length of the urethra, and even to the head of the penis. In some cases, indeed in many, the feeling is of a lascivious, voluptuous, or pleasurable nature, not unlike that which accompanies the earlier stages of sexual intercourse. Not a few patients experience what they call a "dropping sensation," as if the fluid fell from the prostate gland into the urethra. Other anomalous symptoms often present themselves, such as a feeling of weight and fatigue in the region of the prostate, the anus, and rectum, or along the perineum, with, perhaps, more or less uneasiness in voiding urine, and a frequent desire to empty the bladder; some patients are troubled with morbid erections, and their sleep is interrupted with lascivious dreams.

It is astonishing how much the patient's mind often suffers in this affection. The discharge, even if ever so insignificant, occasions him the greatest possible disquietude; for at one time he imagines that it is a source of much bodily debility, or that it is productive of weakness and soreness in the dorso-lumbar region, especially if these symptoms happen to coexist; at another, that he is about to become impotent, under the delusive idea that the flow is one of a seminal character; an idea which not unfrequently haunts him day and night, and from which hardly anything can, perhaps, even temporarily divert his attention. His mind, in short, is poisoned, and the consequence is that he is incessantly engaged in trying to obtain relief, running from one practitioner to another, distrusting all,

and affording none an opportunity of doing him any good. In the worst forms of the affection, his business habits are destroyed, he becomes morose and dyspeptic, and he literally spends his time in watching for the discharge which is the source and cause of his terrible suffering.

The affections with which prostatorrhœa may be confounded are the various forms of urethritis, especially gleet or chronic gonorrhœa, discharges of semen, and chronic inflammation of the bladder.

From urethritis, whether common or specific, it is generally easily distinguished by the history of the case, the nature of the discharge, and the attendant local phenomena. In most cases, the affection comes on gradually, not suddenly, as in gonorrhœa or simple inflammation, and without impure connexion; the discharge is white or greyish, translucent, and ropy, not purulent, opaque, and yellowish; and there is ordinarily no burning or scalding in micturition. Moreover, there is seldom any evidence of inflammation in the urethra or penis. In gleet or chronic urethritis the signs of distinction are sometimes more difficult; but even here a satisfactory conclusion may generally be reached by a careful consideration of the history of the case, and a proper examination of the discharge, which is nearly always more or less puriform, as well as more abundant than in prostatorrhœa. When the discharge of the urethra is kept up by the presence of a stricture, the diagnosis can be determined only by a thorough exploration with the bougie.

Very many patients confound this discharge with a flow of semen; an idea in which they are often encouraged by their attendants, in consequence of their ignorance of the nature of the affection. Much has been said and written respecting diurnal spermatic emissions; but, according to my experience, these evacuations are among the rarest occurrences met with in practice. We are often told that they take place at the water-closet, during efforts at straining, and this is, no doubt, occasionally the case; but more commonly it will be found that these discharges are of a strictly prostatic character, the fluid being forced out of its appropriate receptacles into the urethra, along which it is presently discharged. This delusion will be more likely to take hold of the mind if the escape of the fluid be accompanied by a sort of pleasurable sensation, somewhat similar to that which follows a feeble emission. Persons affected with prostatorrhœa will often tell us that they have quite a number of such evacuations, perhaps as many as six or eight, during the twenty-four hours, especially if they are troubled with disease of the ano-rectal region, leading to frequent visits to the water-closet, or if they are much in female society, engaged in exciting reading, or addicted to the pleasures of the table or to inordinate sexual intercourse, eventuating in general and local debility. Should the history of the case fail to afford the requisite light, it may be promptly supplied by a microscopic examination of the suspected fluid, semen always revealing distinct spermatozoa, whereas the prostatic and urethral secretions never afford any such indications. This will be the case whether the discharge be taken fresh from the orifice of the urethra or from the stiffened spots left upon the patient's linen.

The characteristic symptom of cystorrhœa, or chronic inflammation of the bladder, is an inordinate secretion of mucus, associated, in nearly all cases, with an altered condition of the urine, frequent and difficult micturition, pain in the region of the affected organ, as well as in the surrounding parts, and more or less constitutional disturbance. In prostatorrhœa, there may also be more or less uneasiness low down in the pelvis, with trouble in voiding urine, especially where the prostate is much enlarged, so as to cause constant vesical irritation; but the two disorders are so widely different as to render it impossible to confound them.

The *pathology* of this affection consists in some disorder of the prostate gland, especially of its follicular apparatus, leading to an inordinate secretion of its peculiar fluid, and to a discharge of this fluid along the urethra, at longer or shorter intervals, and in greater or less quantity. That this disorder is, at times, of a real inflammatory nature, would seem extremely probable from the character of the concomitant phenomena, and also from the fact that this organ is frequently, if indeed not generally, found to be more or less enlarged and indurated. Nevertheless, there are cases, and these are by no means uncommon, in which it is, to all appearance, either entirely healthy, or so nearly so as to render it impracticable, by the most careful exploration, to discover any departure from the normal standard. The discharge under such circumstances seems to be the result solely of a heightened functional activity, probably connected with, if not directly dependent upon, disorder of the seminal vesicles, the urethra, neck of the bladder, or recto-anal structures; in other words, upon reflected irritation, or, as our professional forefathers would have denominated it, sympathetic disturbance.

The *prognosis* of prostatorrhœa is generally favourable; for it does not, in itself, present anything grave, being, as just stated, not a disease, but merely a symptom of a disease, usually slight, and therefore easily removable. Its obstinacy, however, is often very great, and hence the surgeon should always be guarded in the expression of his opinion respecting a rapid cure. When the mind deeply sympathises with the local affection, as is so frequently the case, especially in young men of a nervous, irritable temperament, there is no disease which, according to my experience, is more difficult of management, or more likely to result in vexation and disappointment.

In the *treatment* of this affection, one of the first and most important objects is to inquire into the nature of the exciting cause, and, if possible, to remove it. To set about it in any other way would be the climax of absurdity; for here, as everywhere else, our therapeutic measures must be based upon a rational pathology, or a full appreciation of the nature and seat of the disease. The points which should more especially claim attention are, first, the condition of the prostate and its associate organs, and, secondly, the habits and state of health of the patient.

The first of these indications is best fulfilled by a thorough exploration of the genito-urinary apparatus and of the anus and rectum. For this purpose, a catheter is employed with a view of ascertaining the condition of the urethra, the prostate, and the bladder, aided by the finger in the bowel, previously emptied by an enema. In this manner, the surgeon becomes at once apprised of the existence or non-existence of stricture of the urethra, and of the presence or absence of morbid sensibility of its mucous membrane; the size and consistence of the prostate, and the state of the urinary reservoir, particularly as to whether there is inflammation, stone, hypertrophy, or other lesion. The finger in the rectum will be of great service, not only in detecting disease in the prostate and bladder, but also in this tube itself and in the anus. Indeed, without its aid no exploration of these organs could be at all satisfactory. If disease of the seminal vesicles exist, it will usually be evinced by tenderness on pressure through the wall of the bowel, provided the finger is sufficiently long, or the prostate is not too voluminous.

The habits of the patient should be particularly inquired into. In many of this class of persons they are decidedly lascivious, or marked by excessive sexual indulgence, either naturally or in the form of masturbation, the prostate gland, seminal vesicles, and adjoining structures being thus kept in a state of continual excitement, highly favourable to the production of prostatorrhœa. The nature of the patient's diet, his temperament, the state of his health, and his mode of life as it regards sleep and exercise, both of mind and body, also deserve special consideration.

Having ascertained the above facts, or, in other words, having made himself perfectly familiar with the local and general condition of the patient, the surgeon will be able, in most cases, to institute something like a rational mode of treatment. This should be directed, as a general rule, partly to the system at large, partly to the suffering structures.

In many of the cases the patient is weak, or deficient in muscular and digestive power, indicating a necessity for tonics, as iron and quinine, a nutritious diet, with a glass of generous wine, and gentle exercise in the open air, either on foot or in an easy carriage; riding on horseback being scrupulously avoided as likely to keep up undue excitement in the parts. One of the best preparations of iron is the tincture of the chloride, in union with tincture of nux vomica, in the proportion of twenty drops of the former to ten of the latter, four times a day. If the patient be plethoric, he may use with great advantage small doses of tartar emetic in the form of antimonial and saline mixture, care being taken not to nauseate. In either case, it is of paramount importance to correct the secretions and to maintain a soluble condition of the bowels. Drastic purgatives are of course avoided, as they would only tend to perpetuate the mischief. Unless the patient is actually debilitated, he should rigorously abstain from condiments and high-seasoned dishes.

Among the more important topical remedies are, first, moderate sexual indulgence, as a means of allaying undue excitement of the prostate and its associate organs; secondly, cooling and anodyne injections, or weak solutions of nitrate of

silver and laudanum, or, what Dr. Gross generally prefers, Goulard's extract with wine of opium, in the proportion of from one to two drachms of each to ten ounces of water, thrown up forcibly with a large syringe three times a day, and retained three or four minutes in the passage. In obstinate cases, cauterisation of the prostatic portion of the urethra, or even of the entire length of this tube, may be necessary, the operation being repeated once a week. The cold hip-bath should be used twice in the twenty-four hours; the lower bowel should be kept cool and empty; and if the disease do not gradually yield, leeches should be applied to the perineum and around the anus.

MIDWIFERY AND DISEASES OF WOMEN.

THE PLACENTA AND MEMBRANES IN TWIN PREGNANCIES.

Dr. Spaeth of Vienna has observed the condition of the fœtal membranes in 126 cases of twin pregnancy. The following was the result:—

In 49 cases, each had a distinct placenta, chorion, and amnios.

In 46 cases, the placentæ were united; but each fœtus had a distinct chorion and amnios.

In 28 cases, the placentæ were united, and there was a single chorion; but each fœtus had a separate amnios.

In 2 cases, the placentæ were united, and there was a single chorion and amnios.

Where the placentæ were united, the line of junction was often indicated by a distinct depression on the concave surface of the organ and by scanty deposits of fibrine. The line of demarcation was present even where the chorion was single, and where vascular communications between the two placentæ were distinctly seen on their fœtal surface.

In none of the cases where the chorion was single was there the slightest indication of its having been formed by the fusion together of two originally distinct membranes. At the level of the line which separated one amnios from the other, the chorion was always perfectly smooth, without thickening or depression. In cases where the chorions were distinct but the placentæ united, the vessels were always independent and presented no anastomoses. On the other hand, vascular communications between the placentæ existed in two cases where the amnios was single, and in one where there was a doubt as to its being single or double: they were also present in seventeen of the twenty-eight cases where a single chorion enveloped two distinct amniotic membranes.

The anastomoses were always formed by tolerably large branches situated superficially on the inner face of the placenta. Hence, in the majority of cases where the placentæ are united, and where the chorion is single, there is free communication between the vascular systems of the two placentæ. The anastomoses occur sometimes from vein to vein, and sometimes from vein to artery. In one case, M. Spaeth noticed an anastomosis between an artery of one fœtus and a vein of another. (*Zeitschrift der Gesellschaft der Ærzte zu Wien;* and *Gazette Hebdomadaire*, August 24th, 1860.)

UTERINE POLYPUS TREATED BY INJECTION OF PERCHLORIDE OF IRON.

In the *American Medical Monthly* for March 1860, Dr. J. N. Graham of Chicago relates the case of a lady, to whom he was called on account of the occurrence of profuse uterine hæmorrhage. She supposed herself to be about "the turn of life". Dr. Graham employed tonics and astringents, with astringent injections, ice, etc.; but without effect, the hæmorrhage continuing, with occasional and partial respite, during several days. On examination, a soft fleshy substance was found, apparently pendulous from the fundus uteri. Ergot was given to arrest, if possible, the bleeding, and to expel what seemed to be the cause of the trouble. It was continued ten or fourteen hours, with ice and astringent injections; but the hæmorrhage persisted to an alarming extent. Dr. Graham then injected muriated tincture of iron, with one-third part of mucilage of gum-arabic, into the os uteri; opium, tonics, and ergot being continued through the night. The next morning, the patient was more comfortable; and the os uteri was sufficiently dilated to allow the tumour to be grasped by the hand and removed in pieces. It was somewhat larger than a hen's egg. During the removal, there was considerable hæmorrhage, which was soon arrested by cold injections of alum-water. The patient recovered rapidly.

Dr. Graham observes that the application of so strong a solution of perchloride of iron into the uterus may be thought rather a harsh proceeding; but he holds that it was justified by the urgency of the symptoms, and also that the uterus would soon be shielded from injury by the lubricating secretion thrown out by the mouth of the organ. From his experience in this case, he would not hesitate to apply tincture of perchloride of iron, in cases of severe uterine hæmorrhage, either by injection through the os, or on sponge or lint. He believes that, in the case related by him, the iron acted a favourable part in astringing the released matters of the bleeding vessels, and in separating the attachments of the fungus.

LETTERS AND COMMUNICATIONS.

Letters or communications for the Journal should be addressed to Dr. Wynter, Coleherne Court, Old Brompton, S.W.

Letters regarding the business department of the Journal, and corrected proofs, should be sent to 37, Great Queen Street, Lincoln's Inn Fields, W.C.

British Medical Journal.

SATURDAY, SEPTEMBER 8th, 1860.

MEDICAL ASSISTANTS.

A trial has just taken place at Bristol, which furnishes a good example of the trouble and annoyance, not to say injury, which a medical practitioner may suffer in consequence of having engaged the services of an indiscreet assistant. Mr. Munro, a member of the College and Hall, entered into an agreement with Mr. John Adams Tidbould of Chulmleigh, in Devonshire, to assist him in his practice. The engagement was, however, brought to an end by the latter gentleman, and the assistant in consequence brought his action; in the course of which he gave evidence which the attorney for the defence characterised as dictated by "a spirit of revenge". For instance, he stated that, when he entered Mr. Tidbould's service, that gentleman told him to give the patients "sugar, magnesia, and some colouring matter; that for mixtures he must give water with a little tincture of lavender; but that, if there really was anything the matter, he was to give a slight bit of calomel." Of course shouts of laughter accompanied this exposure, as it was supposed, of the secrets of the surgery. We confess, however, it strikes us as rather extraordinary that such preposterous statements as these should have been permitted by the judge, as they had nothing to do with the merits of the case whatever, and were, of course, ridiculously absurd. After a very long examination, in which the plaintiff endeavoured to fix more than one odious imputation upon his late employer, and in which he had the bad taste to state that it was perfectly customary to "oppose an employer", and that, as he had signed no contract not to do so, he felt himself perfectly at liberty on that point, the case for the defence came on, when no fewer than nine women gave evidence to the effect that the plaintiff had been guilty of lewd and improper conduct. The judge stopped the case, by giving it as his opinion that sufficient had been proved by those witnesses to justify Mr. Tidbould in dismissing the plaintiff; a view of the matter which the jury adopted by giving a verdict for the defendant. It is needless to say this vexatious action, which forced the defendant and all

his witnesses to come upwards of a hundred miles from home, was a very expensive proceeding.

We do not see in the existing state of things, however, how a practitioner is to protect himself against similar annoyances. The present method of engaging the services of assistants is anything but satisfactory, and we should be glad to see some scheme hit upon by which there should be some guarantee given of the eligibility of gentlemen who thus offer themselves for very responsible posts, in which the utmost delicacy of conduct and the highest honour are always requisite. There are so many assistants now employed throughout the country, that we should imagine some institution, such as the Governesses' Home, might be established with infinite advantage both to employers and those seeking employment; for it is quite clear that the medical agents at present employed to negociate engagements of this kind, can do little more than bring people together, without having the power of guaranteeing character, or of making such inquiries respecting antecedents, as the responsible nature of the trust emphatically demands.

THE MEDICAL STAFF OF THE GUERNSEY MILITIA AND DR. OZANNE.

The scandal occasioned in the island of Guernsey by the appointment of Dr. Ozanne, a homœopathic practitioner, as a staff-surgeon in the Guernsey Royal Militia, has not yet been wiped out by the cancelling of the appointment, as we were led to expect it would have been; on the contrary, Major-General Slade, the Lieutenant-Governor of the island, who made this very objectionable appointment, appears inclined to treat the protest of the staff-surgeons with marked military *hauteur*. The resignation of these gentlemen, who were so justly outraged by the introduction among them of a medical man who holds, according to their ideas, entirely heretical notions with respect to the cure of disease, has not only not been accepted, but the militia adjutant has directed the colonels of the regiments in which they serve to "order these gentlemen to return to their duty". Such an order was quite unnecessary, as they have been continuing to perform their duties voluntarily, but under protest. It was not in human nature, however, to submit to treatment of this kind; and consequently ten out of the eleven gentlemen forming the medical staff have addressed a powerful memorial to the Secretary of State, setting forth the whole circumstances of the case. This memorial is still under consideration.

It is evident, however, that there is a strong disposition on the part of the militia officers to show discourtesy to our brethren who have thus made a stand against being associated with what they cannot help considering quackery; inasmuch as, at a banquet given to the Lieutenant-Governor the other day, the three staff-surgeons, who had tendered their resignations, were not invited. This petty indignity was resented by the regimental surgeons, who were favoured with invitations, by simply declining to go. The Lieutenant-Governor, was unwise enough, however, to use the occasion to give the "doctors" a gentle snubbing. Alluding to the scandal which his appointment had caused among the entire medical staff of the militia, he said:—

"Be assured that no cabal, however crafty; no clamour, however loud, and no press, however powerful, will ever cause me to swerve from the strict line which my conscience points out to me to be the correct one."

It is certainly rather hard upon the orthodox medical officers of the militia regiments to designate their protest against what they believe to be a high offence to medicine as well as to themselves, as a "crafty cabal". Surely gentlemen have a right to protect their professional honour without drawing down upon themselves a scolding from those in authority. Even governors are expected to behave with courtesy to educated gentlemen; if they do not, the loss is theirs, rather than of the persons whom they have wantonly insulted.

THE PREMONITIONS OF MENTAL DISORDER.

The death of the Rev. Chancellor Martin, under such melancholy circumstances as those to which we adverted last week, occurring so shortly after our having had the advantage of making his acquaintance at the annual meeting of the British Medical Association at Torquay, must have produced a feeling of deep sorrow in the mind of every one who was present at that meeting. In expressing our sympathy for this unfortunate event, it may be well to avail ourselves of the lesson it affords to us in the practice of our profession. It teaches how essential it is to mark the first deviation, however slight, from sound reason in a mind previously vigorous and acute. There are persons who are constantly complaining of imaginary ills and imaginary complaints; but when a person differently constituted complains of maladies which are not discoverable, or exhibits great anxiety about circumstances not requiring it, we should, instead of disregarding the complaint, or seeking to discover a bodily malady, look for the mental malady, and inquire if the individual have not been overworked, his physical powers over exerted. For aught we know, the complaint without apparent cause may be the commencement of the overthrow of a noble mind, and there may be functional disease, either primary or secondary, of the brain, which we know to be the material organ of the manifestation of the mind. It is not, perhaps, being too sanguine to believe that judicious treatment, together with firm advice to avoid and immediately to remove all the circumstances and all the mental exertion which may be found to have contributed to the depressed state, may enable the medical adviser to avert the great calamities which increasing disease might induce. The very fact of a strong mind, such as that undoubtedly possessed by the unfortunate gentleman whose loss we deplore, having been so much upset by a paltry mistake in his accounts, should have undoubtedly suggested to any medical man the existence of mental disease; and, had the matter been at once attended to, in all probability a valuable life would not have been lost. We are too apt to consider the complainings of those who give us no indication of real malady as the mere result of nervous disease, without asking ourselves what nervous disease is, and without diligently investigating whether there be not an excited, or otherwise an anæmic state of the brain and nervous system, and whether it might not be more in accordance with good practice to employ preventive management and system, rather than to have recourse to drugs.

Association Intelligence.

SPECIAL MEETING OF COMMITTEE OF COUNCIL.

A Special Meeting will be holden at the Queen's Hotel, Birmingham, on Thursday, the 20th instant, at one o'clock, for the purpose of taking into consideration the general management of the Journal.

Philip H. Williams, M.D.,
General Secretary.

Worcester, September 4th, 1860.

THIRD LIST OF SUBSCRIPTIONS.

Dr. Williams will feel obliged if the Honorary Secretaries will forward any subscriptions they may have in hand, either to Sir Charles Hastings or himself, not later than the 20th inst., so that they may be published in the Journal.

Worcester, September 4th, 1860.

Editor's Letter Box.

DROPS *versus* MINIMS.

Sir,—As you have called the attention of your readers "to the importance of the difference between the drops and the minims, as a matter of scientific as well as practical interest in medicine", I beg leave to offer you my thoughts on that subject.

The difference alluded to is a matter of which I have never lost sight for many years; and I have always felt sorry and perplexed when I have observed drop and minim (or gtt. and ♏) so vaguely and interchangeably prescribed by others; for it is surely impossible that any medical man cannot be aware of the uncertain and in many cases dangerous tendency of such a method. As regards my own practice, indeed, I do not feel that I run any risk, having ascertained the kind of drop, and its proportion to the minim, in the preparations which I use. I have ascertained that a given number of *drops* of tincture of opium, when dropped carefully from a tincture-bottle with a rim rather more than an inch in diameter, makes just half the quantity of the same number of *minims*. I always carry an ounce-bottle about half full in my pocket, to use at patients' houses, where dropping is most convenient. Now, the rim of this phial is about nine-tenths of an inch in circumference, and it takes nearly thirty drops from it to be equal to ten minims. My usual dose from it is from thirty to forty or fifty *drops*. This mode is what I generally adopt for children. One thing should be remembered; that, if dropped from a phial the rim of which is small and not well defined, the drop will fall, not from the edge, but partly from between it and the neck, and will be considerably larger. It required one hundred and twenty-eight drops from the edge, but only ninety drops from the edge and neck, to make a drachm. A phial should also be only half full, or there will be a difference.

In respect to hydrocyanic acid (a mistake in which, very ignorantly made, occasioned the death of a lady at Lewes under such painful circumstances, and which, it appears, called for the article in the Journal of July 28th), I have experimented with different phials; I mean the ounce-phials in which Scheele's acid is sold. It takes forty *drops* from one not quite half full to make twenty *minims;* from another narrower but longer bottle, and containing a larger quantity, it required but thirty *drops* to make twenty minims. Then, how varied is the direction on those phials! On one it reads, "*Medium dose, two minims*"; and on another, "*Minimum dose, one drop*". Now only let us for a moment think what a range is here, and *what* a direction for a dispensing chemist! A medium dose, two minims; or, as I have ascertained, four drops! He might well think seven drops not too much for a safe maximum dose. I never myself venture to give more than two drops, or a fraction more; that is, from sixteen to twenty drops in an eight-ounce mixture; and I almost always combine with it the camphorated tincture of opium, which, I think, has a tendency to prevent any depressing effect which it might have.

There is, however, one method which would, I should say, very generally prevent mistakes and overdoses, when strong medicines like hydrocyanic acid, morphia, or even tartarised antimony, are employed. It is to keep them in a state of solution, so as to be able to ascertain the quantities used, instead of being always bothered and perplexed with drops and minims. Perhaps the hydrocyanic acid might not keep long in a diluted state; but there need not be much of it mixed at one time. However, I would suggest that, if we *do* use drops at any time, we should ascertain their value, and always drop from the same phial, carefully wetting the rim first, and taking care to drop from the edge only. I might also add, that it is convenient to drop into a minim glass, that, if the fluid should happen to drop too fast, which may sometimes happen even with a steady hand, the excess may be poured back.

I am, etc., M.

August 22nd, 1860.

THE LIVERPOOL NORTHERN HOSPITAL AND ITS MEDICAL OFFICERS.

Letter from A. T. H. Waters, M.R.C.P.

Sir,—In your leading article on the Liverpool Northern Hospital in the Journal of Saturday last, you have fallen into an error as to a matter of fact. You state: "Already, however, the senior physician and surgeon are *ex officiis* members of the committee." This is not correct. No alteration of the laws has yet been made; but a proposition has emanated from the committee to introduce into it the medical element. The question has been submitted to the medical board for their consideration and advice, and it is probable that in this respect the wishes of the board will be carried out, viz., that to every meeting of the committee a physician and a surgeon should be summoned, either in rotation, or in such other manner as may be fixed upon by the medical board.

I am, etc., A. T. H. Waters,
One of the Physicians of the Northern Hospital, and Secretary to the Medical Board.

Liverpool, September 4th, 1860.

THE MEDICAL DIACONATE.

Letter from Harrington Tuke, M.D.

Sir,—In your report of the proceedings of the Association at Torquay, some remarks of mine were inserted, with alterations and omissions, which have made it appear that I dread the interference, or undervalue the services in sickness, of the ministers of the church of England. That my words did not, that my practice does not, warrant such an inference, the following passages may suffice to prove:—

"It is impossible, that any one present reverently remembering who bore the name of the Great Physician, can doubt the close connection between the clerical profession and our own. Dr. Conolly, in our special branch of the profession, was among the first to discover and to warmly advocate the importance of clerical ministrations. I and others have entirely adopted his views; but, valuable as such assistance has proved in our special department, I do not think it practicable to extend clerical interference to the treatment of general disease."

Although very much annoyed at the probability of the misapprehension of my views implied in the omission of these sentences, I did not trouble you on the subject. I was, besides, consoled at finding the general inaccuracy of the report exposed in an able letter by Dr. Stewart. I am quite of your opinion that the pages of our Journal are not adapted for theological questions; I was, therefore, surprised to read in the editorial correspondence of the next week's Journal, a letter which, as I read it, and as Dr. Swayne and others appear to have read it, is eminently sectarian, and contains phrases you yourself have since characterised as "objectionable". As the writer had mentioned me by name, and had thus by implication involved me in his views, I at once wrote to you, disavowing his sentiments as mine, and requesting you to insert the passages of my speech I have now been again obliged to quote. This letter you did not think proper to insert; it has, perhaps, not reached you, as you have not even acknowledged it, either privately or in your usual list of "communications received". I had not sought the notice which your favoured correspondent has forced upon my opinions; I do not know what your own may be; I do not propose to examine whether you correctly state yourself to be fair and impartial, in refusing admission to "replies and rejoinders", after having inserted a letter which has given pain to every sincere supporter of the church of Eng-

land amongst our members: such a letter as I believe could only have been inserted by an oversight. I ask only that my personal defence, which your admitted oversight has rendered necessary, should appear in the Journal, or a good reason be given why it should not.

I am, etc., Harrington Tuke.

The Manor House, Chiswick, W., Sept. 2nd, 1860.

[We very willingly give Dr. Tuke's corrected version of his speech. His first letter never reached us. Editor.]

DIAGNOSIS OF *POST MORTEM* CRANIAL ECCHYMOSIS.

Letter from Thos. R. Heywood Thomson, M.D.

Sir,—The queries to which Mr. A. C. Gibson invites the attention of associates in your Journal of the 28th ult., though difficult to decide upon in most cases, can in his be replied to affirmatively. I presume that sufficient "indications of contusion" were found in the following appearances which I quote from Mr. Gibson's statement, viz., "Small coagula immediately under the scalp with more minute coagula infiltrating the cellular tissue; the whole of the tissues there being distended and thickened by circumscribed extravasation." The mere presence of coagula would not determine the question, but with the appearances, quoted in these thirteen last words, I do not see how the gentlemen recording the autopsy could have made any other statement, than that they believed such changes to have resulted from a contusion during life. The subject is one of such interest that I hope others will offer their opinions.

I am, etc., Thos. R. Heywood Thomson.

Beechwood, Aigburth, Liverpool, August 5th, 1860.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

** In these lists, an asterisk is prefixed to the names of Members of the Association.*

BIRTHS.

Of sons, the wives of—

Claremont, C. C., Esq., Surgeon, 1, Thorney Place, N.W., on September 3.

Ruck, David, Esq., Surgeon, Cirencester, on August 30.

Of daughters, the wives of—

Blake, Ethelbert R., M.D., Royal Artillery, at Southend, on August 29.

Clark, Alfred, Esq., Surgeon, Twickenham, on Sept. 1.

*Colebrooke, Henry, M.D., Southborough, Tunbridge Wells, on August 31.

D'Olier, J. A., M.B., at York Place, Bow Road, on Aug. 31.

Jones, Sydney, M.B., at 15, St. Thomas's Street, S.E., on September 2.

Kingsford, Charles D., M.D., Upper Clapton, on Sept. 2.

Tyte, Edward C., Esq., Surgeon, Harrow, on September 3.

MARRIAGES.

Adams, Matthew A., Esq., Surgeon, Ware, to Mary Ann, daughter of Richard Prall, Esq., of Rochester, on August 29.

*Dickinson, Joseph, M.D., F.R.S., of Liverpool, to Anna Maria, eldest daughter of Daniel Campbell, Esq., Tealwood Park, Liverpool, on August 28.

Grimes, John Ralph, Esq., to Mary Ann, only child of *George Lund, M.D., Madeira, at Patington, near Hull, on Aug. 23.

*Holman, Constantine, M.D., of Reigate, to Marion, younger daughter of *William Street, Esq., of the same place, on August 30.

Ramsay, —, M.D., R.N., to Robina, fifth daughter of the late David Kerr, Esq., Liverpool, at St. John's, Notting Hill, on September 4.

Sadler, Michael T., M.B., Burnley, to Anne Eliza, the only daughter of the late John Adams, Esq., of West Torrington, at Legsby, Lincolnshire, on August 29.

Thorp, the Reverend Gervase, Ipswich, to Margaret M. E., eldest daughter of William England, M.D., of the same place, at Kemerton, Gloucestershire, on September 4.

Webb, Frederick E., Esq., Surgeon, Windsor Terrace, Maida Hill, to Mary Anne, only daughter of John Grafton, Esq., Blomfield Crescent, at St. Saviour's, Paddington, on Aug. 28.

Whittle, Edward H., Esq., Surgeon, Brenchley, Kent, to Phœbe Eliza, youngest daughter of the late Ebenezer Brookes, Esq., Hurst Green, Sussex, at All Saints, St. John's Wood, on August 30.

Wilson, Charles E., Esq., Her Majesty's Inspector of Schools, to Joanne F., second daughter of Andrew Robertson, M.D., at Indego, Tarland, on August 28.

Winter, John N., Esq., Surgeon, Brighton, to Marie, eldest daughter of Edward Salzmann, Esq., at Lower Norwood, on August 23.

DEATHS.

Brock. On August 31, at 14, Brompton Square, aged 16, Caroline M., youngest daughter of Henry G. Brock, M.D., R.N.

*Busigny, Charles E., Esq., at Ombersley, Worcestershire, suddenly, on August 29.

Clark. On September 1, at Twickenham, aged 76, Lucy Ellen, wife of Charles C. Clark, Esq., Surgeon.

Duméril, M., the eminent naturalist, in Paris, aged 86, lately.

Fox. On June 22, at Graham's Town, Cape of Good Hope, aged 26, Henry John, eldest son of Luther O. Fox, M.D., of Broughton, Hants.

Gosset, Daniel, M.D., at Brighton, aged 66, on August 29.

*Hey, Richard, Esq., of York, at Ellesborough Rectory, Bucks, on September 1.

Kelaart, Edward F., M.D., Staff-Surgeon, late of Ceylon, on board the *Ripon*, suddenly, aged 41, on August 31.

Meeres, Thomas, Esq., Surgeon, at 19, King Street, Finsbury Square, aged 63, on September 3.

Stilwell. On September 1, at Epsom, aged 20, Mary Elizabeth, second daughter of *George Stilwell, Esq.

Sweet. On Septamber 1, at Llandudno, aged 45, Elizabeth E., wife of John L. Sweet, Esq., Surgeon, of Tenbury.

PASS LISTS.

University of London. M.B. First Examination. 1860. Examination for Honours.

Anatomy and Physiology.

Baildon, John (Exhibition and Gold Medal), University of Edinburgh
Roberts, Fredk. Thos. (Gold Medal), University College
Bogg, Thomas Wemyss, University College
Marsdin, Frederic, King's College } Equal.
Smith, Thomas Starkey, University College } Equal.
Tibbits, Edward Thomas, University College } Equal.
Morton, Thomas, King's College
March, Henry Colley, St. Mary's Hospital
Gale, Henry Stanley, King's College
Mercer, John Thomas, Guy's Hospital
Edis, Arthur Wellesley, Westminster Hospital } Equal.
King, Edmund Cornish, University College } Equal.

Chemistry.

Brown, A. Crum, M.A.Edin. } Exhibition { GoldMedal—University of Edin. } Equal.
Tibbets, Edward Thomas } Exhibition { GoldMedal—University College } Equal.
Griffiths, Thomas, University College
Bogg, Thomas Wemyss, University College
Watson, Forbes, St. Thomas's Hospital
Jones, John Talfourd, University College
Gale, Henry Stanley, King's College
Smith, Thomas Starkey, University College

Materia Medica and Pharmaceutical Chemistry.

Watson, Forbes (Exhibition and Gold Medal), St. Thomas's Hospital
Smith, Thomas Starkey (Gold Medal), University College
Roberts, Frederick Thomas, University College } Equal.
Marsdin, Frederick, King's College } Equal.
Baildon, John, University of Edinburgh
Gale, Henry Stanley, King's College } Equal.
Jones, John Talfourd, University College } Equal.

Structural and Physiological Botany.

Watson, Forbes (Gold Medal), St. Thomas's Hospital
Bogg, Thomas Wemyss, University College
Tibbits, Edward Thomas, University College
Gale, Henry Stanley, King's College

Apothecaries' Hall. Licentiates admitted on *Thursday, August 23rd*, 1860:—

Alderson, John, Birmingham
Hallowes, Frederick B., Canterbury
Helm, George F., St. Bartholomew's Hospital
Westmacott, Joseph V. L., Chorlton Union Workhouse, Manchester

Thursday, August 30th.

Clarke, Alfred Frederick Strafford, Manchester
Cotton, Thomas, Spalding, Lincolnshire
Faull, John Vivian, Bristol
Gayton, William, London
Jenkins, John Thomas
Maurice, Oliver Calley, Marlborough, Wilts

The following gentlemen also, on the same day, passed their first examination:—

Bowes, William, London Hospital
Marsdin, Frederick, King's College
Passmore, Thomas Henry, Guy's Hospital

Fiske Fund. The Trustees of the Fiske Fund announce that two premiums of 100 dollars each have been awarded—one to a dissertation on Diphtheria, by Dr. Daniel D. Slade, of Boston, Mass., and one to a dissertation on Uræmia and its Morbid Effects, by Dr. William W. Moreland, of Boston. The following subjects are announced for 1861:—1. Aneurism: its varieties and their appropriate treatment. 2. Ozone: its relations to health and disease. For the best dissertation on either subject, the Trustees offer a premium of one hundred dollars. Dissertations should be sent, free of expense, to Dr. S. A. Arnold, Secretary of the Fiske Fund Trustees, Providence, Rhode Island, on or before May 1st, 1861. Each should be marked by some motto, and accompanied by a sealed packet, containing the same motto on the outside, and the writer's name and residence within. Packets accompanying unsuccessful dissertations will be destroyed unopened. The award will be announced at the annual meeting of the Rhode Island Medical Society, to be held in June, 1861. (*American Medical Times*, August 18th.)

Cattle-Disease in America. A fearful epizootic is now destroying the cattle in certain portions of the State of Massachusetts, and has already extended to some of the adjoining States. Not long after its first appearance, and about three months since (it having originated from some imported stock), the Massachusetts Legislature appointed a "Board of Commissioners" to provide for its extirpation; that Legislature has recently been again convened, expressly to consider "what further action in this emergency is required."..The Governors and State Agricultural Societies of Ohio, Kentucky, Pennsylvania, and New Jersey, having commissioned competent medical men to visit and inspect the diseased herds in Massachusetts, have already received satisfactory reports and recommendations from the gentlemen employed on that service. They all agree in the opinion that the disease is contingently contagious or communicable, and hence, that to prevent its extension, all the sick and contaminated animals should be subjected to a strict quarantine. (*American Medical Times*, August 18.)

Royal College of Surgeons. The library and museum of the College was closed on Saturday last, for the annual cleansing and rearrangement of the books and preparations. Both will re-open on Monday the 1st of October.

Medical Charities. Lady Vaughan has left by will One Hundred Pounds to each of the following charities, viz., the Northampton Infirmary, the Bedford Infirmary, the East Sussex and St. Leonard's Infirmary, and the Middlesex Hospital. The executors of the late Mr. R. Stephenson have paid the governors of the Newcastle-on-Tyne Infirmary a legacy of £10,000, bequeathed by the lamented deceased to that institution.

Bequest to the Medical Profession. Don J. Gomez, a rich Spaniard, who has recently died at Havana, has left by will a sum, the interest of which, amounting to 4,000 or 5,000 *francs* (from £160 to £200), is to be distributed annually among the medical men of the commune of Hazas in the province of Santander.

University of Padua. M. Vanzetti, Professor of Clinical Surgery in the University of Padua, has been nominated President of the Faculty of Medicine in that university. M. Vanzetti has, we believe, the merit of having introduced into practice the treatment of aneurism by digital compression.

John Hunter. The Council of the Royal College of Surgeons have just caused a beautiful memorial tablet to be placed over the site of the grave of Hunter resting in Westminster Abbey, with the following inscription. "Beneath are deposited the remains of John Hunter, born at Long Calderwood, Lanarkshire, N.B., on the 13th of February, 1728. Died in London on the 16th of October, 1793. His remains were removed from the church of St. Martin's-in-the-Fields to this Abbey on the 28th of March, 1859. The Royal College of Surgeons of England have placed this Tablet over the grave of Hunter to record their admiration of his genius as a gifted interpreter of the Divine Power and Wisdom at work in the Laws of Organic Life, and their grateful veneration for his services to mankind as the Founder of Scientific Surgery." The above inscription is deeply cut in brass of a Gothic design, inlaid in a slab of polished red granite, and presents a chaste and elegant appearance. The work has been executed by the Messrs. Hardman of Birmingham. Mr. Weekes, the eminent sculptor, is progressing favourably with the statue of Hunter, which is to be of marble, and to be placed in the Hunterian Museum. Mr. South, the President of the College, is still receiving subscriptions to go towards the foundation of a scholarship after the payment for the statue. Our transatlantic brethren, who have already sent a handsome sum to Mr. South, are continuing their subscriptions.

The Legion of Honour. The following members of the medical profession, with others, have lately received the following orders of the Legion of Honour: *Commanders*, M. J. Cloquet, M. Ricord, and M. Vaillant; *Officers*, M. Guérin, M. Le Canu, M. Tardieu, and M. Robert.

Revision of Pharmacopœias. The subject of revision of the Pharmacopœia appears to be attracting general attention. Not only is the Medical Council at work on a British Pharmacopœia for the United Kingdom, but the French are revising their *Codex*, and a convention at Washington is engaged in the formation of a new Pharmacopœia for the United States.

Action for Infection of a Nurse by a Syphilitic Infant. The civil tribunal of the Seine has lately been called on to decide an action brought by a wetnurse and her husband against the parents of a child, which had infected the said nurse with syphilis. The parents were condemned to pay the sum of 3,000 *francs* (£120) to the nurse and her husband. The medical attendant of the child's parents was also indicted for negligence, but acquitted.

Phlebotomy in Spain. M. San-Martin, surgeon, has been appointed phlebotomist (*sangrador*) to the royal family of Spain.

HEALTH OF LONDON—SEPTEMBER 1st, 1860.

[*From the Registrar-General's Report.*]

	Births.	Deaths.
During week ..... Boys.. 944 Girls.. 905	1849	1018
Average of corresponding weeks 1850-9	1586	1149

Among the causes of death were—bronchitis, 54; pneumonia, 58; phthisis, 124; small-pox, 7; scarlatina, 57; measles, 43; diphtheria, 3; hooping-cough, 20. The deaths from pulmonary diseases (exclusive of phthisis) were 120, being 39 above the corrected average.

Barometer:
Highest (Mon.) 29·713; lowest (Th.) 29·225; mean 29·537.

Thermometer:
In sun—highest (Sat.) 122·0 degs.; lowest (Mon. & Wed.) 110·0 degs.
In shade—highest (Sun.) 70·0 degrees.; lowest (Sat.) 46·7 degrees.
Mean—58·0 degrees; difference from mean of 43 yrs.—1·3 degree.
Range—during week, 23·3 degrees; mean daily, 17·4 degrees.

Mean humidity of air (*saturation*=100), 82.
Mean direction of wind, S.W.—Rain in inches, 0·81.

TO CORRESPONDENTS.

Anonymous Correspondents should always enclose their names to the Editor; not for publication, but in token of good faith. No attention can be paid to communications not thus authenticated.

Members should remember that corrections for the current week's Journal should not arrive later than Wednesday.

POSTAGE OF MANUSCRIPT AND PRINTED MATTER.

Any amount of manuscript or printed matter, singly or together, provided it contains nothing in the form of a written letter, is transmitted through the post, in packets *open at the ends*, at the following rates: not exceeding 4 ounces, one penny; above 4 and not exceeding 8 ounces, twopence; above 8 ounces and not exceeding 1 pound, fourpence; for every additional half-pound or under, twopence.

Communications have been received from:—Dr. J. G. Swayne; Mr. T. M. Stone; Mr. Norman; Dr. Harrington Tuke; Mr. C. J. Evans; Dr. T. R. Heywood Thomson; Dr. Barham; Dr. P. H. Williams; Dr. Paget; Dr. Nelson; Mr. Price; Dr. H. Dobell; Mr. R. Hughes; Mr. W. Dale; Mr. W. Ellis; Mr. J. C. Wordsworth; Mr. Tidbould; Mr. W. J. Square; and Dr. J. C. Hall.

St. Mary's Hospital Medical School.

—The WINTER SESSION will commence on Monday, October 1st, at Eight o'clock p.m., with an INTRODUCTORY ADDRESS by Dr. TYLER SMITH, after which a CONVERSAZIONE will be held in the Museum.

It is a distinctive characteristic of St. Mary's Hospital that its Medical Appointments are conferred upon the Pupils without additional fee. Three Resident Medical Officers are appointed for twelve months, and one, the Obstetric Officer, for six months, all of whom board free of every expense in the Hospital. The money value of these FIVE Appointments far exceeds as many SCHOLARSHIPS of Fifty Pounds each. Four Non-Resident Medical Officers are also selected from the best qualified Students.

Physicians—Dr. Alderson, Dr. Chambers, Dr. Sibson, Dr. Handfield Jones, Dr. Sieveking, and Dr. Markham.
Surgeons—Mr. Coulson, Mr. Lane, Mr. Ure, Mr. Spencer Smith, Mr. Walton, and Mr. J. Lane.
Physician-Accoucheur—Dr. Tyler Smith.
Ophthalmic Surgeon—Mr. White Cooper.
Aural Surgeon—Mr. Toynbee. Surgeon-Dentist—Mr. Sercombe.

LECTURES.—Clinical Medicine: Dr. Alderson, Dr. Chambers, and Dr. Sibson—Clinical Surgery: Mr. Coulson, Mr. Lane, and Mr. Ure—Medicine: Dr. Chambers and Dr. Sibson—Surgery—Mr. Coulson and Mr. Spencer Smith—Physiology and Morbid Anatomy: Dr. Markham and Mr. James Lane—Anatomy: Mr. James Lane and Mr. Gascoyen—Operations on the Dead Body: Mr. Walton—Dissections: Mr. Gascoyen and Mr. Davy—Chemistry and Practical Chemistry: Mr. Field—Midwifery: Dr. Tyler Smith and Dr. Graily Hewitt—Materia Medica: Dr. Sieveking—Botany: Dr. Dresser—Medical Jurisprudence: Dr. Sanderson—Ophthalmic Surgery: Mr. White Cooper—Aural Surgery: Mr. Toynbee—Dental Surgery: Mr. Sercombe—Comparative Anatomy: Dr. Graily Hewitt—Natural Philosophy: Mr. Smalley.

The In-Patients are visited daily by the Medical Officers, and the Out-Patients are also attended daily by the Physicians and Surgeons in charge of them. During the past year relief was afforded to 1549 In-Patients and 13727 Out-Patients. A Maternity Department is attached to the Hospital.

Students are required to perform the duties of Clinical Clerks and Dressers in each Session during the last two years of their curriculum.

SCHOLARSHIPS, PRIZES, etc.—In addition to the Medical Appointments mentioned above, a Scholarship in Anatomy, of the annual value of £25, is offered to the Students. Examinations for Prizes will take place at the end of each Session.

The Fee for the Hospital Practice and Lectures required by the College of Surgeons, and Society of Apothecaries is £89 : 5, which may be paid by instalments.

Further information may be obtained on application to the Dean of the School, who will also furnish the names of Gentlemen in practice near the Hospital willing to receive pupils to reside with them.

GEO. G. GASCOYEN, Dean of the School.

St. Mary's Hospital, August 1860.

St. George's Hospital Medical School.

—The WINTER SESSION will commence on MONDAY, the 1st of OCTOBER, with an INTRODUCTORY ADDRESS by Dr. PITMAN, at 2 p.m.

LECTURERS.

Practice of Physic—Dr. Pitman.
Practice of Surgery—Mr. Tatum.
Descriptive and Surgical Anatomy—Mr. Pollock and Mr. Gray.
Physiology, General and Comparative Anatomy—Mr. A. Johnson.
Chymistry—Dr. H. M. Noad.

The Hospital contains 350 beds. Clinical Lectures will be delivered every week by one of the Physicians and Surgeons.

A Ward is devoted to Diseases peculiar to Women. Pupils have ample opportunity to attend Midwifery cases.

Fees for Hospital Practice and Lectures to qualify for

The College of Physicians....£81 18s.
The College of Surgeons ....£87 3s.
The Society of Apothecaries..£67 4s.
The College of Surgeons and Society of Apothecaries .. £96 12s.

Pupils who prefer to spread the payment of the fees for the College and Hall over a period of three years, may do so, by payment of £42 the first year, £42 the second year, and £12 12s. the third year. Perpetual Pupils of the Surgeons, have to pay an additional sum of 30 guineas the first year; or of the Physicians, 8 guineas. Separate Entries may be made to any one Course of Lectures, or to the Medical or Surgical Practice.

Perpetual Pupils of the Surgeons are alone eligible to be Assistant House-Surgeon for six months, and House-Surgeon for twelve months, without additional fee. Students of this Hospital are eligible to the office of Obstetric Assistant, who resides and boards in the Hospital, with a salary of £100 a-year. The Obstetric Assistant gives instruction in Vaccination.

EXHIBITIONS AND PRIZES.

The William Brown Exhibition of £40 per annum, tenable for three years, will be open to Students entering to the Hospital as Perpetual Pupils during the Winter Session 1860.

The following Prizes will be offered at the termination of the Session, viz.—

The Thompson Silver Medal, for Clinical Reports.
Sir Charles Clarke's Prize for Good Conduct.
Sir Benjamin Brodie's Prize for Surgical Reports of Cases.
Mr. Lewis Powell's Prize for Medical Reports of Cases.

A Prize of Twenty Guineas, for general proficiency in Medical Studies, for Students who enter to the Hospital Medical School for the Session 1860.

And for the encouragement of Clinical Study—

A Prize of Twenty Guineas, for Surgeons' Pupils in their second year.
A Prize of Twenty Guineas, for Physicians' Pupils in their second year.

*** Further information may be obtained from Mr. Pollock, the Treasurer of the School; or from Mr. Hammerton, the Resident Medical Officer of the Hospital.

London Hospital Medical College,

Mile End. July 28th, 1860.—The next WINTER SESSION will commence on Monday, October 1st, 1860, when the Introductory Lecture will be delivered by Dr. BARNES, at Three p.m.

General Fee, qualifying for the Examinations of the London University, Royal College of Surgeons, and Apothecaries' Hall, 84 guineas, payable in two instalments of 42 guineas each, at the commencement of the two first Winter Sessions of attendance.

Perpetual Fee to the Lectures alone, £50.

Students can make special entries to Lectures or Hospital Practice.

Further particulars and Prospectuses can be had on application to Dr. PARKER, Honorary Secretary, 22, Finsbury Square, E.C.; or at the College.

LECTURERS at the LONDON HOSPITAL MEDICAL AND SURGICAL COLLEGE.

Nicholas Parker, M.D.....Medicine.
T. B. Curling, F.R.S. / George Critchett ....Surgery.
John Adams....Descriptive and Surgical Anatomy.
Andrew Clark, M.D.....Physiology and General and Morbid Anatomy. Practical Histology.
John Couper....Practical Anatomy.
Henry Letheby, M.B. Lond..... Chemistry. / Practical Chemistry.
H. J. Barrett....Anatomy and Pathology of the Teeth & Dental Surgery.
F. H. Ramsbotham, M.D.....Midwifery and Diseases of Women and Children.
F. H. Ramsbotham, M.D..... / Henry Letheby M.B.Lond. .. Forensic Medicine.
Herbert Davies, M.D.....Materia Medica and General Therapeutics.
George Critchett....Ophthalmic Surgery.
Christopher Dresser, Ph.D.....Botany.
J. Langdon H. Down, M.D.....Comparative Anatomy.

University of Edinburgh.

CHANCELLOR—Lord BROUGHAM.

VICE-CHANCELLOR—Principal Sir DAVID BREWSTER, K.T.

RECTOR—The Right Hon. W. E. GLADSTONE.

The SESSION will be publicly opened on FRIDAY, November 2, 1860, at Two o'Clock p.m., when an Address to the Students will be delivered by the PRINCIPAL. The Classes for the different Branches of Medical Study will be opened as follows:—

Dietetics, Materia Medica, and Pharmacy ..	Mon. Nov. 5,	9 o'clock	Dr. Christison, 40, Moray-place.
Chemistry	Mon. Nov. 5,	10 „	Dr. Lyon Playfair, 14, Abercromby-place.
Surgery	Mon. Nov. 5,	10 „	Prof. Miller, 29, Charlotte-square.
Institutes of Medicine..	Mon. Nov. 5,	11 „	Dr. Bennett, 1, Glenfinlas-street.
Midwifery and Diseases of Women and Children	Mon. Nov. 5,	11 „	Dr. Simpson, 52, Queen-street.
Clinical Surgery (Monday and Thursday) ..	Mon. Nov. 5,	12 „	Prof. Syme, 2, Rutland-street.
Clinical Medicine (Tuesday and Friday).....	Tues. Nov. 6,	12 to 2 „	Drs. Bennett and Laycock.
Anatomy	Mon. Nov. 5,	2 „	Prof. Goodsir, College.
General Pathology	Mon. Nov. 5,	4 „	Dr. Henderson, 19, Ainslie-place.
Natural History.....	Mon. Nov. 5,	1 „	Prof. Allman, 21, Manor-place.
Practice of Physic	Mon. Nov. 5,	3 „	Dr. Laycock, 4, Rutland-street.
Anatomical Demonstrations.....	Mon. Nov. 5,	4 „	Prof. Goodsir, College.

Royal Infirmary, at Noon, Daily.

Practical Anatomy, under the Superintendence of Prof. Goodsir.
Practical Chemistry, under the Superintendence of Dr. Lyon Playfair.
Analytical Chemistry, under the Superintendence of Dr. Lyon Playfair.

During the SUMMER SESSION, Lectures will be given on the following Branches of Education:—

Botany—by Dr. Balfour.
Histology—by Dr. Bennett.
Medical Jurisprudence—by Dr. Traill.
Clinical Medicine—
Clinical Surgery—by Prof. Syme.
Comparative Anatomy—by Prof. Goodsir.
Anatomical Demonstrations—by Prof. Goodsir.
Practical Chemistry and Pharmacy—under the Direction of Dr. Lyon Playfair.
Practical Anatomy—under the Superintendence of Prof. Goodsir.
Natural History—by Prof. Allman.
Medical Psychology, with Practical Instruction at an Asylum—by Dr. Laycock.

N.B.—Information relative to the Curricula of Study for Degrees, Examinations, etc., may be obtained, on application to the Secretary, at the College. A Table of Fees may be seen in the Matriculation Office, and in the Reading-room of the Library.

By Authority of the Senatus,

August, 1860. ALEX. SMITH, Sec. to the University.

Dr. Caplin's Electro-Chemical Bath

ESTABLISHMENT, 9, York Place, Baker Street, Portman Square, for the extraction of Mercury and other Metallic or Extraneous Substances, and the Treatment of Chronic Diseases. For the demonstration of this new system, *vide* the Second Edition, price 1s., 8vo, of Dr. Caplin's Treatise on the Electro-Chemical Bath, and the Relation of Electricity to the Phenomena of Life, Health, and Disease. Sold at the Author's Establishment.